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ABSTRACT

Conference proceedings are presented from a 1975 workshop sponsored by the Bureau of Education for the Handicapped on research needs related to early childhood education for the handicapped. The document is divided into papers and remarks on four areas of research needs: child characteristics (remarks by N. Anastasiow), service delivery systems (a paper by S. Cohen), institutional models (remarks by I. Sigel), and personnel development (a paper by W. Northcott). Listed are such top priority research needs identified by conference participants as developing and validating early identification procedures, investigating service delivery systems and institutions to involve hard-to-reach families and children, and defining the specific skills needed by personnel in different settings in varied disciplines. (CL)

PROCEEDINGS OF THE CONFERENCE ON RESEARCH NEEDS RELATED TO EARLY CHILDHOOD EDUCATION FOR THE HANDICAPPED

February 11-13, 1975

Bureau of Education
for the Handicapped
U.S. Office of Education

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FOREWORD

by

Edwin Martin
Chief
Bureau of Education
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FOREWORD

The U.S. Office of Education is committed to assuring equal educational opportunities for all handicapped children. Efforts of the Office of Education in meeting this commitment are coordinated through the Bureau of Education for the Handicapped. Education of handicapped children has been adopted by the U.S. Office of Education as one of its major priorities. Among the objectives designed to implement this priority are: 1) to assure that every handicapped child is receiving an appropriately designed education; 2) to assure that every handicapped child who leaves school has had career educational training that is relevant to the job market, meaningful to his career aspirations, and realistic to his fullest potential; 3) to assure that all handicapped children served in the schools have a trained teacher or other resource person competent in the skills required to aid a child in reaching his full potential; 4) to secure the enrollment of preschool-aged handicapped children in federal, state, and local educational and day-care programs; and 5) to encourage additional educational programming for severely handicapped children to enable them to become as independent as possible, thereby reducing their requirements for institutional care and providing opportunities for self-development.

Research and development activities of the Bureau are directed toward providing information and developing products which can be directly related to the accomplishment of these objectives. Current planning activities, of which these conferences are a significant part, will permit us to specify better the barriers to meeting these objectives. Further, we will be able to define, and hopefully prioritize, key issues where research and development activities can significantly contribute to the overall mission of the Bureau.

PREFACE

by

Max Mueller
Chief
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for the Handicapped

PREFACE

The Research Projects Branch of the Bureau of Education for the Handicapped (BEH) is implementing a comprehensive planning effort designed to determine how research activities can best contribute to the accomplishment of Bureau objectives. The broad purposes of this planning effort are to identify significant barriers to accomplishment of these objectives, to delineate key substantive issues related to these objectives, to identify promising strategies for removing these barriers, and to address these issues through research and related activities. Initial goals are to develop long-range research plans related to Bureau objectives and to identify specific research tasks which merit immediate attention in terms of support for research and related purposes.

Our primary concern in initiating this planning effort is that the resulting plan, and especially the identification of specific tasks to be accomplished in the immediate future, truly reflect the best current thinking of the broadest possible sampling of the field of special education and related disciplines. We fully realize that our efforts must result in a program which is responsive both to the constraints imposed by our responsibilities as managers of public funds and to the needs of handicapped children as perceived by the consumers of research.

Procedures for award of grants and contracts increasingly demand that decisions regarding support for research and related purposes be made by federal program managers. If we are to implement this emerging responsibility effectively, it is critical that we increase our communication with our

constituency. We can only maintain the credibility of the research program by systematically seeking input from the professional community.

The need for more definitive planning is reinforced by the severe limitations of available funds for research and related purposes. The number of the problems associated with education of the handicapped unquestionably exceeds by several orders of magnitude the number that could be attacked feasibly under present funding levels. Thus, it is imperative that we not only identify issues which are relevant but also identify those issues and problems which are most critical at this point in time.

It is especially important now that we involve the field fully in the process of developing research plans and priorities. We are hopeful that the strategies outlined will assure an optimal level of credibility, relevance, responsiveness, and effectiveness in the research program. The initial objectives to be accomplished are:

1. To develop a systematic organizational schema for addressing each of the Bureau objectives
2. To identify significant content (issues, problems, needs, and so on)
3. To prioritize content both within and across objectives
4. To identify research strategies related to those areas where approaches are appropriate

Research Planning Strategies

Strategies have been developed on the basis of several assumptions which, like the resulting plans, are subject to modification based on input from the field. Our basic assumptions are:

1. That practitioners are a primary source for identifying critical needs related to improvement of educational opportunities for the handicapped

2. That research expertise is essential to defining problems to be solved through research; and deciding what research or research-related strategies may appropriately be brought to bear on the solution of problems of education for the handicapped
3. That, through the interaction of practitioners and researchers, it is possible to optimize the ultimate impact of research support
4. That we will be effective in our efforts to communicate to our constituency: (a) the overall planning schema, (b) the results of each of the procedures for obtaining target group input, and (c) the overall support pattern emanating from the planning schema

Given the foregoing rationale, objectives, and assumptions, a number of strategies will be employed to establish professional relevance and credibility. At least six forms of input appear to have promise for assuring adequate communication with relevant constituences:

1. Research Needs Task Forces
2. Position Papers
3. Needs Assessments
4. Research Integration Projects
5. Expert Reviews
6. Research Needs Conferences

Research needs task forces: Throughout the planning process, task force groups will be constituted to assist Bureau staff in accomplishing the research planning task. The composition of any given task force would depend on the specific effort being addressed, but overall, a broad range of people would be involved: federal and nonfederal personnel, researchers and consumers of research findings, special educators and personnel from multiple disciplines, and so on.

Position papers: The Research Projects Branch solicits suggestions from the field in several ways. We welcome position papers from individuals and/or organizations relating to any of the Bureau's objectives. This strategy should provide considerable input in terms of the identification of significant needs, content, and appropriate research strategies. As the research planning effort proceeds, we anticipate that certain issues may surface which will call for specifically invited position papers focusing on such special issues. Though it is doubtful that every idea submitted can be directly incorporated in the plans or individual requests for proposals, all position papers, whether specifically invited or not, will be carefully considered as these plans develop.

Needs assessments: The Research Projects Branch will identify major issues through comprehensive, national cross-sectional surveys of those involved in the education of handicapped children. Such surveys will identify content areas, and analyses of responses will also contribute to establishing priorities.

Research integration projects: In some areas of education of the handicapped, the most immediate need related to research planning is to synthesize and critically review existing information. A very large body of research on education of the handicapped has been created over the last quarter century. This body of research has not been evaluated comprehensively with respect to technical quality, utility, and potential for codification and wider diffusion. Integration and evaluation of this literature and experience are required to aid in the planning and definition of research programs concerned with improvement of educational opportunities for the handicapped and to provide a basis for potential use by local, state, and federal education agencies.

Tightly objective accounts of the present state of knowledge should be highly valuable to researchers developing plans for future thrusts and to BEH/OE

which could then develop specific program announcements or requests for proposals for work designed to fill identified gaps or to answer specific, critical questions.

Expert reviews: The primary purpose of expert review will be to provide consensual validation of content areas and priorities. Throughout the research-planning process, therefore, resulting documentation will be subjected to extensive expert reviews. Such reviews will be tailored to a great extent to the nature of any given document. However, several general considerations are immediately apparent. Whatever the content of a given document, both individual and institutional expertise will be employed to assist our staff in refining and evaluating the documentation. Certain organizations (such as the Council for Exceptional Children or the National Association of State Directors of Special Education) will be invited to participate. Some documents may require review by experts from related disciplines, by consumers, and by others.

Research needs conferences: Interaction between research and consumer constituencies will be encouraged by support of topical national forums for establishing major issues. Conferences such as this one should contribute to all of the planning tasks. Such activities are particularly important in identifying those problems in the education of the handicapped which can be addressed most effectively through research and related activities. Particular reasons for conferences of this type are: (1) to examine what has been investigated and what needs investigation in each area, (2) to describe better the role of BEH in organizing its resources for more effective research and demonstration efforts, and (3) to investigate ways of disseminating and interpreting research information so that it can be applied by practitioners.

How BEH Views Research and the Handicapped

The research program of the Bureau of Education for the Handicapped has as its

mission the improvement of educational programs for handicapped children through the stimulation and support of applied research and related activities. Support is directed at providing the information and resources necessary to increase the availability of appropriate educational opportunities for every handicapped child.

In order to stimulate more effective programming for handicapped children, the Bureau is structuring its research and development program to link research and research-related activities more directly to the support of special education services. Activities supported under the research program must be applied in nature and must show promise of producing valid and relevant information. Whether an activity is applied is determined on the basis of the extent to which such activity:

1. Is a direct effort to solve some critical education problem; and
2. Is planned so that the final product of such activity can be reasonably expected to have a direct influence on the performance of handicapped children or on personnel responsible for the education of the handicapped.

In terms of research support through the BEH, the handicapped are defined as those persons requiring special educational adjustment associated with mental retardation, serious emotional disturbance, visual impairment, hearing impairment, speech disorders, crippling and other health impairments, and learning disabilities.

Support for research and related activities through the BEH pertaining to young handicapped children is guided by two definitions:

> "Handicapped children" means mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired children who by reason thereof require special education and related services. The term includes children with specific learning disabilities to the extent that such children are health impaired children who by reason thereof require special education and related services.

> "Preschool and early education" refers to a period from birth to the time a child would normally complete the third grade. The term includes the prenatal period where there is evidence that a handicapped child will be born.

Although the age specified in the latter definition ranges from approximately birth to eight years, concentration is primarily placed on the handicapped child from birth to five years of age.

The Bureau has been spending about $10 million a year on support of research and related activities, and we hope to be able to at least maintain, if not increase, this support over the coming years. Our principal purpose in holding this conference was to obtain input from a broad range of special educators and related specialists to assist the Bureau's program planning. This fits into our larger objective of improving planning to make the most effective and efficient use of the limited federal research investment. We hope that the information generated by this conference may have a very broad impact on research programming related to early childhood education for the handicapped; we guarantee that your deliberations will influence the way the Bureau allocates its research resources.

INTRODUCTION

INTRODUCTION

Primary among the concerns of the Research Projects Branch of the Bureau of Education for the Handicapped (BEH) is the question of priorities: Of all the research needs that might be identified about the education of the handicapped, which are the most crucial to pursue over the next five years? In seeking a response to that question, the Bureau has involved special and vocational education practitioners, occupational and physical therapists, counselors, researchers, and others in the field in planning research priorities for the 1970s.

The Bureau carried out this dialogue with its colleagues in the field by holding four two-day workshop conferences, each of which involved from 66 to 91 persons representing various levels of concern for, and knowledge of, the handicapped, and each planned by a steering committee of 10 to 15 members. Each conference focused on finding the priorities and research needs of one aspect of education for the handicapped. The four topics considered were: 1) career education for the handicapped; 2) education of the severely handicapped; 3) early childhood education for the handicapped; and 4) development of personnel to serve the handicapped.

Background of the Conference

The success of the Conference on Early Childhood Education depended as much on careful planning as it did on active and creative participation. A crucial first step was the selection of the Steering Committee. On August 7, 1974, staff members of BEH and Educational Testing Service (ETS) met in Washington, D. C. and selected 15 persons--BEH staff members who were most knowledgeable about the field and others

throughout the country most expert in and aware of research and programming in each of the areas of early childhood education for the handicapped.

The members of the Steering Committee for the Conference on Early Childhood Education for the Handicapped (the names of the members are listed in Appendix A) met in Washington, D. C. for a two-day conference from September 4 to 6. During those two days, the Steering Committee members laid the foundation of the conference and developed the conceptual model shown as Figure 1 on page 5. From their knowledge of, and experience in, the field, they decided on the topics, or tasks, to be addressed by the participants and then worked out the focus session/work session structure to accommodate them. They also decided on the dates on which such a conference could be given to gain maximum attendance. They drew on their knowledge of the people in their field to identify possible conference leaders who, in turn, would be helpful in suggesting possible participants. The committee members were helped in the task of nominating participants by chief state school officers, state directors of special education, and officers of professional organizations and associations throughout the nation who sent in suggestions by mail.

In November, the members of the Steering Committee officially nominated those whom they felt would be the best participants for the conference. They also reviewed and approved their earlier suggestions about the content, dates, and structure of the conference. The names of those nominated by the Steering Committee were then reviewed and approved by the BEH Project Officer and those people, together with others nominated by the Bureau, were issued invitations to the conference.

The Conference

The Conference on Research Needs Related to Early Childhood Education for the Handicapped was held at the Henry Chauncey Conference Center at ETS in Princeton, New Jersey from February 11 to 13, 1975. The 91 participants included teachers and

Figure 1

Conceptual Model
for the conference on
Identification of Research Needs Related to
Early Childhood Education for the Handicapped

	CHILD CHARACTERISTICS Age Developmental Level Handicap	SERVICE DELIVERY SYSTEMS Curriculum Program Process	INSTITUTIONAL MODELS School Institution Agency Home	PERSONNEL PREPARATION Teachers Trainers Related Professionals Parents
Research Topic Definition of Need				
Research Products Information Materials Processes				
Research Procedures Investigation Development				
Research Priorities Immediate Long Range				
Research Dissemination Demonstration Installation Implementation				

administrators of special and vocational education, rehabilitation counselors, researchers, and others involved in the education of the handicapped.

The two-day session was a workshop conference that focused upon the identification of research needs relating to four topic areas in early education for the handicapped: child characteristics, service delivery systems, institutional models, and personnel development.

The conference was structured in a modular fashion with participants addressing each area, or task, in both large- and small-group work sessions. For each task, all participants met first for a focus session during which one or several speakers provided a stimulus for the work sessions that followed by exploring various aspects of the subject. In the focus session on institutional models, for example, Irving Sigel analyzed institutions such as families, public schools, and governments as systems and sociological and anthropological phenomena all possessing certain common characteristics.

After each focus session, the participants formed themselves into 10 teams of 7 or 8 members each to identify and explore researchable ideas in each task area. This was accomplished in two steps: first, by getting down on paper all the research ideas each team could think of within a reasonable time limit and second, making selections from those ideas, refining them, writing a rationale, and suggesting possible research approaches and the potential uses of such research for each.

The conference participants began with their first focus session late Tuesday afternoon and concluded their initial brainstorming sessions late that night. Beginning at nine o'clock on Wednesday morning, they continued alternating focus sessions with team sessions until they had covered all four tasks late Wednesday night.

On Thursday, the final day of the conference, each participant met with one group to work on one of the topic areas (child characteristics, service delivery systems and institutional models, and personnel development) and to select the top-priority needs in the field of early childhood education for the handicapped.

A summary of the research needs recommended for study by the conference participants--the top-priority needs announced on Thursday and the additional research needs from which they were derived--are discussed in "Recommendations" beginning on page 75.

TASK 1:

Identification of Research Needs
Relating to Child Characteristics
in Early Childhood Education
for the Handicapped

Remarks by

Nicholas Anastasiow

Institute for Child Study
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We have a major problem in special education, particularly in early childhood education for the handicapped. We have used generic terms to describe populations of handicapped persons, such as mentally retarded, deaf, and blind, but these terms really don't describe clearly who the people are, what skills they possess, and what specific training is best suited for their needs. For example, in looking at some of the research studies conducted with mentally retarded persons, we noticed that many experimenters will control for mental age (for example, 60-70 months); however, the chronological ages range from 7 to 17 years. It is questionable whether studies like this can be replicated or even if it is a legitimate technique to conduct studies with CA's of that broad a range. In-depth studies of one or two children with similar characteristics may tell us more.

If we use a noncategorical approach in educating handicapped persons, it would seem to me that we would have to have much more substantive descriptions of subject characteristics than we possess now, and perhaps that's been one of my major messages--that research should aid us in getting these substantive descriptions of characteristics of individuals and perhaps small groups. However, as Charles Johnson said in his novel Faith and the Good Thing, "Thou shalt not criticize before questing," so let's quest for a while.

If I were to suggest when early childhood education should begin, I would hold it should begin by providing prospective parents with some education about how children grow and develop. The next educational focus would begin when the mother knows she has conceived, with support systems providing advice, feedback, or direct service. Direct services to children should be begun as early as possible with

focus on the period of 0-2 years, particularly for the handicapped child, until the child enters some type of school arrangement. We know that major changes are operating during this early stage of life that have a major impact on what the child can become. As Tolstoy wrote "From the child of five to myself is but a step, but from the newborn baby to the child of five is an appalling distance." The amount of development--the amount of change--that occurs in the first five years of human life is an enormous distance. For those of us who work with children who have some sensory deficit or handicapping condition, we are pressed to provide stimulation and remediation as early as the first days of life to be able to combat the very rapid and enormous change that occurs in all infants. Fortunately, the human organism has enormous flexibility and ability to cope with sensory lacks. We have to become wise enough to know when to intervene and how to respond to each type of deficit to enable the child to develop compensatory mechanisms which will enable him to offset any potential negative effects of his deficit. And perhaps that's how we should look at our research.

The Brain as a Survival Mechanism

My point of view (and I've borrowed it from Bergson, a biologist) is that the brain is a survival mechanism designed to help us in filtering out and paying attention to those aspects of the environment that help us survive. It seems to me that at birth this action begins, with the brain acting as a filter so that the organism can act within an environment. Evidence suggests that genes do not determine specific traits, but are tuned to give a specific reaction to an environmental stimulation, if it occurs. These experiences change the original formation of the brain at birth. My definition of intelligence is that it is part genetic; part of it has to do with growth and maturation of functions; and part has to do with experiences--direct experiences a child has within a particular culture, subculture, and within a family.

Dewey, Vygotsky, and Piaget all refer to these experiences as activity. These environmental interactions trigger the development of certain kinds of mechanisms in the child. Further development is due, in part, to teaching. For example, children learn the name of a specific thing within a given culture when it is taught to them, usually at the time they request it. Thus, some children say "dog," others "bow-wow," others "chien." A further ingredient in intellectual development is warmth and caring about a child on the part of the mother or caretaker.

At birth, the baby has other mechanisms of survival: thrashing, which seems to be related to temperature control; ability to suck; ability to turn his head; ability to lift his head; ability to smile (The significance of the smile is still being debated--blind children smile as well as children who can see. Is smiling a means of stimulating attachment to the mother?). As I've stressed earlier, the child at birth has a brain which is acting upon and responding to the environment. I see all of these as survival mechanisms, and some of the most interesting research has come out of those who use the behavioral approach in looking at these kinds of mechanisms that are available to the child to see how much conditioning or, if you join me in defining conditioning as learning, how much learning can take place or will take place in the very first hours of life.

Most psychologists today accept that the infant at birth has a mature enough nervous system to respond to the environment or act upon the environment himself. In Leningrad, they have found that a baby two hours old will move his head in the direction of a sound when rewarded for doing so. Most of these experiments usually reward the baby by giving sugar water through a nipple when the baby turns his head and looks at an object. We also know that babies, in the first days of life, will stare and fixate at faces if allowed to do so. Later (sometimes as early as the first month of life), after the baby gets used to looking at faces, it tends to prefer more complex stimuli.

Scientists at Brown University have done many studies, and I'll just summarize some of them. As we know, in the first two or three days of life, children can differentiate between p and d sounds when rewarded for doing so. One of Lipsitt's students, observing a baby thrashing within its crib, inferred that the baby was looking at a mobile above the bed and was trying to make it move. The student wondered what would happen if he tied a string to the baby's leg and to the mobile. He found that the total thrashing movement of the baby decreased, and the major activity of the baby was in the area of the arm or the leg where the string was tied. These results were obtained at the very advanced age of two months. Very young children can learn to control aspects of their environment when the environment responds to them.

We know also that there are temperamental differences among babies. Temperamental differences are observed in the first three days of life. By three days of age, children show different response rates, some slow, some fast.

In a very carefully controlled experiment of children's thrashing movements, Condon and Sander photographed the children's thrashing while they played different voices (voices with different rhythmic qualities) into the crib. They found that there was a noticeable change in the babies' thrashing to match the rhythmic quality of each voice. This finding occurred during the first day of life. I think this finding has profound implications for deaf education and for language learning in general. Perhaps the child begins to sense the whole nature of language in terms of its rhythmic quality from the first day of life or from the moment his mother is able to be with him.

We know that there are some very rapid performance periods in a child's life. The period between seven and eight months, for example, seems to be very important for language development. What happens if the child goes to the hospital with a severe medical problem (not a handicapping condition) during this period? Does

that delay his language development? How many pediatricians would be able to recognize that the age of seven months is a critical learning time as well as a critical time in terms of a disease that a child may have? Burton White suggests a critical time for the development of social skills is from seven to eight months after birth. Primary attachment begins the first day of life. By four months, children are smiling at the sound of a mother's or father's voice (whether a blind or seeing child). In the seven or eight months after birth, attachment studies show that any disruptions with the primary figure seem to present problems to the child.

Curiosity seeking begins about 8 to 14 months. Those children whose mothers allow them the greatest amount of exploration within the home seem to mature at a normal rate or a rate comparable to developmental scales that we have.

Problem-solving skills begin in the first year of life, at least as far as instrumental learning is concerned, and seem to proceed rapidly thereafter. At six or seven months of age, then, the child begins to acquire a whole set of skills.

It seems to me that not only have we gotten into difficulty by describing large classes of children as being of a certain disorder--handicapped in some way--but we've also divided the different kinds of skills the child possesses into different categories such as language, social skills, curiosity, problem solving, and the rest, as if each were distinctly separated and unrelated. But when we look at the age at which very important developments occur, the skills are very similar. So one of the questions on my list of needed research is: What impact does the lack of stimulation in one area have on growth in other areas?

Let's talk about a few other capacities a child has at an early age. Eimas suggests that children may have a feature detector device which allows them to selectively process language early in life. This feature detector, Eimas suggests, may trigger speech as early as two months of life. Butterfield and Cairns studied two-month-old infants who can discriminate between vowels and the fundamental frequency

contours in language. Two-month-old infants! Butterfield and Siperstein observed that infants will tend to suck longer if they hear music and voices rather than music alone. In fact, in very early life, children appear not to be able to detect sounds other than speech sounds. Piaget and cognitive psychologists such as Neisser would suggest that language is a manifestation of probably the general skill or ability to symbolize. Speech is probably an indication of cognitive functioning. I would suggest that language is under the control of cognitive functioning, at least until a child is an adolescent. It would seem to me that language follows the course of cognitive development. And if we study language development, we might see some things about a child's development that would otherwise be hidden from us.

What About Lateralization?

Recent research on the brain suggests that lateralization of speech in terms of the left hemisphere begins as early as the first week of life. The specialization of the left hemisphere is not completed until five or six years of age for most children, but lateralization begins very early. Given early lateralization, what implications does this have for the deaf child?

We also know that for most middle-class children who are normal the lateralization is complete sometime during the magical period of five to seven when something happens to children which we still don't understand. There are several theories that try to explain it. We have Piagetian cognitive theory, we have Freudian affective theory, we have Sheldon White's theory of temporal stacking, but we really don't know why these major changes occur during that time--it's what Piaget calls "the great mystery of stages." Piaget recognizes that stages of development occur; we really do not yet know what happens to cause a child to move from one stage of development to another. A great amount of research should be done to help us understand stages.

We also know from recent research that the left side of the brain seems to be

largely verbal. It's also culturally oriented. The left hemisphere seems to be constructed as a result of direct experience within a given culture. This half of the brain is highly organized and also culturally time-oriented. The right side of the brain may be free of "clock" time, may not possess language, may be the more creative, and may possess musical ability. The communication between the right side of the brain and the left side of the brain may be a slow process. We know that among children we call "learning disabled," we find that lateralization of the left hemisphere is slower--boys who are slower readers in particular tend to not have the lateralization of the left hemisphere complete by age six. Does this tell us something about when children should begin formal schooling?

What about other processes? It seems to me that you would have to severely deprive a child to keep him from walking. But what about sitting? Does a child sit naturally? Or do we teach him how? In Sweden they are questioning the effect of being prone in early life on cognitive development. In Swedish hospitals, infants no longer lie flat in their cribs, but are tilted.

When Lipsitt, in his studies of low-birth-weight children who were placed in incubators, piped in music, rocked the incubator, and also provided colors, he found that the child who had these experiences seemed to proceed at a more rapid rate in terms of her learning than a group of children who experienced incubators in what we would call a "stark" environment. Lipsitt's research has had a great impact on hospital practice, at least in modern progressive hospitals, where low-birth-weight children are taken out of the incubator frequently and brought to their mothers much sooner than they once were. As Lipsitt has pointed out, about 70 percent of children who are born prematurely are classified later as having a school-related problem. It is safe to say that lack of early stimulation or interactions with others has major effects on attachment and visual and auditory processing.

How Does Knowledge Develop Over Time

Piaget's theory describes the universal kind of knowledge that all children learn as part of their own activity and their own experimentation. In part, it is a kind of sudden insight, the rightness about a conclusion that a child reaches through his own experimentation. David Feldman suggests that perhaps creativity is the same process Piaget describes for all children, but on a different level. Feldman suggests the gifted child pulls previously unrelated ideas together and offers the culture something unique in the same manner children learn about universal laws.

The question that used to be asked about the normal child and needs to be asked for the handicapped child is this: How does knowledge develop and change over time for the human organism, whether normal or handicapped? We have a good descriptive theory in Piaget, which allows us to raise many hypotheses, but we should not have our curiosity blunted by feeling that we know the answer at this point in time.

Other Questions

One of the greatest dangers to research workers at this time is to assume that we know how we teach children to read. A lot of children learn how to read, and I think we are vastly more successful in assisting them in learning how to read than our critics say we are. But I think we'd be hard-pressed to describe our method. We can offer a variety of theories and a variety of points of view, but I think these techniques work because most children teach themselves how to read. When we find that a child has a sensory lack or doesn't have all his systems operating, and we try to come up with some theoretical reason based on the way most children learn to read, we find that it really doesn't work that way at all.

In Piaget's theory, knowledge is of three kinds: the basic laws of how this universe operates in terms of physics and chemistry; knowledge of the external world

or social knowledge; and abstract reasoning or logical mathematical knowledge. This third type is, according to Piaget, the highest order of knowledge, which usually is related to a body of content, like law or mathematics. It would seem to me that it is also related to instruction. The purpose of education is to teach children how to learn for themselves and go beyond us rather than accumulating facts. It seems to me that Langer's evidence that 50 percent of the normal population cannot think in abstract terms suggests that perhaps our schools are not involving children in the process of learning how to learn or learning how to deal with abstract reasoning.

Knowledge or Performance

If all human beings from the very first hours of life learn to perceive patterns and to stabilize them, then children learn things far earlier than we realize. Eleanor Maccoby's work, for example, shows us that children can recognize and distinguish among geometric forms long before they can produce them. Children as young as two or three years of age can tell you what a diamond is. Thus, knowledge precedes performance, and we should take care that we do not assume lack of knowledge when a child cannot perform a task. Although one can be taught how to look at paintings and recognize their greatness, this does not mean that one would be able to paint them. Similarly, all too frequently our criteria for the end result of research study is performance on the part of the child rather than the child's understanding. Can we generate ways to insure that understandings rather than performance are the outcomes of our intervention or instructional goals?

Language Learning

When children learn what something is and how something works, they usually ask their mothers for a name for it. If the mother doesn't provide a name, they usually invent one; for example, "mum" for all furry animals. Children, when first learning

language, tend to use very broad categories. In Nelson's study, some children use "cookie" to stand for everything that the child likes to eat and "no cookie" for everything the child doesn't like to eat. While "no cookie" may include cookies, "cookies" may be celery, peanut butter, and graham crackers. Children also resist learning words for things if they think they are redundant. A child who has learned what a ball is and has learned the word "ball" will probably not use adjectives such as red, round, or striped, which, to him, are redundant characteristics of the ball. On the other hand, he may learn "ball go," "Daddy ball," or "throw ball." It would seem to me that we need to look into our language-learning experiences with handicapped children. Are we really trying to teach the child redundancies which he resists or are we trying to pattern his language learning in the way that normal children learn language?

Inadequate Diet

We know that an inadequate diet probably does as much damage to children as anything else. I was shocked to read that an estimated 20 million children in the United States alone--not in the world, but in the United States alone--live on inadequate, or poverty, diets. That's an enormous number of children. Particularly since, as Charles Mayo said, "Sickness may make people poor, but poverty makes people sick."

I would suggest that we ask, as a research question of high priority, what the effects of an inadequate diet are on a child over time. We have some data from animal research studies to indicate what effects diet may have, but we need specific data on the effect of inadequate diet on intelligence, learning, learning styles, and handicapping conditions.

Very Young and Old Mothers

We know that the mothers who have children very early or late in life have more children than average, and are also the mothers who have premature babies. We

know that prematurity is associated with many, many handicapping conditions. Thus, studies of premature babies at birth seem to me to be of the highest priority.

Some Final Questions

If we define "handicapped" as a symptom of a potential need for specific learning strategies, then we might ask what those characteristics are. What about mental retardation? It seems to me that we may not even have to call a child mentally retarded if we just say the child appears to be one whose learning pattern suggests to us that Strategy A may work with children of these particular characteristics and Strategy B with children with these other patterns.

When we ask the question about strategies for children, we should ask what strategies for what child, in what setting, and with what kinds of specific characteristics? It seems to me that as special educators, we are really diagnosticians or clinicians who look at how we can help children acquire the skills they need.

What about the gifted? We haven't asked ourselves much recently about the gifted. What about giftedness in the deaf? What about giftedness in the visually impaired? How far can we assist the sensory deficit/intellectually gifted? In Russia, American visitors have been very impressed with the deaf-blind who seemed to have excellent command of language through finger spelling. To me, a very high-priority research area with rubella babies is how we can assist the deaf/blind to acquire oral language.

What is the difference between the failure to process auditory data by dialectalism (poverty children with a black dialect or bilingual children in the Southwest) and the failure to hear auditory data? Is there a difference? Do we treat both types of problems in the same manner? Should these children have the same type of classroom program? Currently we offer similar treatment for what may be very different learning problems.

Do we know what types of attending behaviors the child must possess that are required in learning how to read? Are the differences between a child's spoken system and his writing system (and therefore his reading system) well known? That's a major question right now with poverty youngsters, particularly black poverty youngsters.

In the case of the blind, we know that some of these children have some vision. It's very difficult to detect minimum vision in the newborn, and we are aware that if this vision is not stimulated, these children will lose that capacity. How do we begin to detect how much vision a child has at birth and when do we begin stimulation? What is the nature of the stimulation that should be provided?

Temperament is something we tossed away during the 30s and 40s, and Birch and some of the others brought it back to us a few years ago, and most of us interventionists have let it lie there. What impact does a child's temperament have on the mother? What strategies are best used with what type of child? What effect do temperament differences have on the teacher? How do we communicate these differences to teachers? Do we help teachers and parents recognize that response rates are genetically determined and may take a lot of living with?

What is the effect of hospitalization on a child? What happens to the relationship between the child and the mother when the child is hospitalized, particularly the visually impaired child?

If the blind child starts his life with smiles and keeps smiling to the sound of his mother's and father's voice until about the fourth month and then stops, what impact does this have on the mother? What kind of training may the mother need? I think some of the research on the blind suggests that children will develop some kind of hand signals which might communicate affect. But how do we help the blind child, in his early development of affect, communicate that so he can establish transaction with his caretaker? Do we know the relationship between early

cataract surgery for some children and later development, both affective and cognitive?

A major question is: How do we measure the long-range effectiveness of an intervention program? There are few, if any, efficacy studies extending from early childhood into adulthood. For example, what generalization effects do you get from vocalization training early in life on affective development?

In Summary

I think the exciting thing about being involved in programs for the handicapped, particularly the very young handicapped, is that there is a possibility that the brain is capable of developing new modes of operation in the absence of something that most of us take for granted. In the absence of vision, human beings can become very creative, deal with abstract reasoning, and live full and rich lives. We know that the brain can surmount almost every sensory defect of a handicapping condition. To me, that's our greatest challenge. We must focus on goals built on the premise that education is the pursuit of learning, not the pursuit of things that we've known since the 30s. It seems to me that many of our programs have been most successful with things that were taught to us by early childhood developmental psychologists in the 1930s such as Josephine Hilgard, who documented the ages when children can button their coats and use scissors. Have we the same amount of knowledge about children's thinking skills? I think not. I would argue that much knowledge can be gained from very well-designed research. However, we must conduct some longitudinal studies with small groups of children and develop case studies.

Our goal must be to develop instructional techniques and strategies to maximize the probablility that each of the handicapped children or persons we work with will be able to construct his and her own meanings and operate within society.

Suggested Readings

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TASK 2:

Identification of Research Needs
Relating to Service Delivery Systems
in Early Childhood Education
for the Handicapped

Research Needs in Relation to Service Delivery Systems

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I'm going to start with a statement of limitations--mine--in relation to the topic. I know that many of you sitting in the audience listening to me now have much more extensive knowledge about service delivery systems than I do. With that in mind, I didn't attempt to prepare a comprehensive analysis of the subject, but rather decided to define my role in terms of raising some questions and making some suggestions about aspects of the topic which interest me. If you disagree with my suggestions, we will have a good starting point for the small discussion groups which follow.

My first problem in dealing with the topic was to figure out what was meant by "service delivery systems." The notes of the Steering Committee seemed to point to two different foci. One of these is how services are delivered--settings, funding, personnel. The other is what services are delivered--the program, the curriculum. Since I was advised not to feel constrained by the Steering Committee guidelines, I'm going to talk a little about both of these aspects of service delivery systems.

Major Service Delivery Systems Now in Operation

I will begin by briefly noting what I consider the more obvious major service delivery systems now operating. Perhaps the most obvious of these is the First Chance Network of model early childhood demonstration centers funded by BEH, which is so well represented here today. Head Start, particularly since its recent mandate to reserve 10 percent of its places for the handicapped, is certainly another major service delivery system, one which will undoubtedly increase in effectiveness as it assumes more responsibility toward the handicapped during the next few years. Day care is also showing expanded interest in handicapped children and their needs.

We usually think of the public schools as service delivery systems for children

starting at age five. I was, myself, quite surprised to read recently in The Futures of Children (Hobbs, 1975*) that 12 state education departments are now authorized to offer services to handicapped children from birth onward, and another 16 are authorized to assume responsibility for educational services at various points prior to age five. Not all of these states are taking advantage of their authorizations, but the fact that such authorizations have been achieved is very promising.

Another type of service delivery system worth noting is the parent-organized, parent-administered preschool program for handicapped children. Parents have stepped in and filled some of the gaps which existed in the educational services available for their children. Local agencies such as hospitals, mental health clinics, community centers, and social service organizations have also, for many years, helped fill the gaps in educational service delivery for young handicapped children.

In relation to the very great interest at this conference in children from birth to age three, I think we have to look much more carefully at hospitals and other medical facilities as possible centers for delivery of educational services. For children three years and older, the school is probably the most natural setting for the delivery of educational services, but if we are talking about infants, the best place to reach them is in medical centers.

National organizations such as The National Association for Retarded Citizens (NARC) and United Cerebral Palsy (UCP) have always provided educational services for specific populations. The broadening of the populations served by specific service delivery systems is a trend worth noting. Mental health clinics no longer work only with emotionally disturbed children; nor do hospital-based programs focus only on children in need of medical treatment.

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* Hobbs, N. The futures of children. San Francisco: Jossey Bass, Inc., 1975

The service delivery systems just described all emanate from a physical center. They usually include group settings or classes for children in addition to a variety of other services. A newer, different kind of service delivery system is one which is home-based. (The Portage Project is a good example of this, but there are many others.) There are a number of important differences between home- and center-based systems. (1) The home, rather than the center, is where the learning takes place. This has a lot of implications. If we have a home-based program, we find richness in the home; we find learning experiences there which we have a tendency to ignore when we're center-based. (2) The parent becomes the primary teacher. The educator may not relate directly to the child at all, or may do so only in a limited way. (3) The parent becomes the primary learner, the one whom the educator teaches. This means that we need educators who are able to transmit their knowledge and skills through another adult rather than directly to children.

Many service delivery systems are now moving toward some combination of home and center bases, taking advantage of the special features and advantages of each.

Another service delivery system we have to think about is the state institution. Institutions differ because of the residential factor and because, until recently, education was a low priority in many of them. The possibilities for educational service were greatly limited by these factors. Fortunately, the situation seems to be changing somewhat at this time, with more flexibility in residential arrangements and more attention to education apparent in some parts of this system.

These are the standard service delivery systems which we usually think about in education. But there are others we can identify which are growing in impact.

Other Service Delivery Systems

In network television, we are witnessing the beginning of an explosion in educational programming for and about the handicapped. Without much thought I can tick off eight or ten examples. Perhaps the best known and most comprehensive of these efforts

is the work being done by Mister Rogers' Neighborhood, which has in its library five programs involving a child with spina bifida; five programs involving a member of the Theatre for the Deaf; and five programs which highlight the value of individual differences (The Purple Planet series). In the works now, under funding from BEH, are multimedia packages of coordinated materials designed for handicapped children functioning at different levels.

For school-age children there is an increasing number of Zoom guest segments about children with impairments, including one great segment where preteens at a camp for the deaf discuss some of the problems they experience within the family and community.

"Everybody's Different," one program in a series called Ripples produced by National Instructional Television, focuses on an orthopedically handicapped child.

ABC's series Over 7 has included several segments dealing with handicapped individuals.

Television programs about the handicapped which are designed for adults are increasing: Instructional programs are appearing in such areas as manual communications and more handicapped characters are being written into fictional stories for television.

The services these programs can deliver are of several kinds. First, they can provide direct instruction for the handicapped. Second, they can provide instruction to the nonhandicapped about the handicapped. Third, they can help foster a more receptive milieu for the handicapped. This latter is not usually thought of as a service, but it is the basic ingredient--a kind of fertilizer--that makes services bloom.

A different application of television can be seen in the telecommunication system for children in the home which BEH is now seeking to develop. The figure now being given for children of school age who are not in school is two million. Not all of these children are handicapped in the formal definition of this term, but certainly a sizable number of them are.

Finally, I might mention at least one supportive system, such as the Regional Resource Center Network, which has combined direct service on a demonstration basis with training and development activities.

Functions of Service Delivery Systems

Now that we've identified some of the major service delivery systems, I'd like to ask some questions about how they function and make some suggestions about those aspects of their functioning that need to be studied more carefully.

I see a need for better conceptualization and analysis in our model service systems.

Let us take perhaps the best early-childhood service delivery system as an example--The First Chance Network. In the life of a service delivery system, there is probably a time when development, demonstration, and evaluation need to take different priorities. In the first four years of the First Chance Network, for example (or now in Head Start in relation to the handicapped) it was probably most important to give priority to innovative thinking, to a kind of massive brainstorming experience. Now, however, when a considerable number of projects have been brought through the development phase, it is probably time to give priority to other tasks. Primary among these would be a systematic effort to analyze the developed models into major conceptual categories. Without this kind of analysis we can't even begin to go down that road toward answering the major question about service delivery systems--namely: What service models are effective?

Here I think we could take a closer look at our colleagues in the area of the disadvantaged. Whatever the final conclusions about Head Start, there are clearly conceptualized models which can then be studied, acted on, and disseminated. It is an area in which we need to improve. It will also be a more

complex task in special education because we are dealing with a much more critically varied population..

We need to address ourselves in our service systems to less global questions. The kinds of questions addressed by service delivery systems are not usually research or evaluation questions. They are more often convictions. This is true, for example, of the idea of parent involvement, and, more recently, the move to develop educational service programs for infants and toddlers. If you're proving a conviction, you don't ask analytic questions. Development and demonstration of convictions have a place and a role in education. We need them. But as we move toward dissemination and attempts at large-scale institutionalization, we need more refined data. It's time we got past the opening convictions and on to more specific questions in some areas. At least we should ask, for example, what kind of parent involvement, for what kinds of children, with what kind of content, is effective?

How can we go about this better conceptualization of our models and this move toward a more focused look at what we are doing? There are probably several ways. 1) Reserve part of the funds for model programs for new projects designed to provide data on some focused questions. This may mean stimulating proposals from consortia of agencies which include organizations equipped to deal with research and evaluation questions. 2) Establish formal, system-wide research and evaluation arms, which work with model service programs at various phases of development to help them gather data useful in answering questions defined as system-wide priorities. 3) Establish a closer interface between research and service--for example, between the Research and Service Divisions of BEH--so that those whose major strength lies in analysis and evaluation are used to help answer the questions we need to have examined carefully in relation to service. This conference is an example of such an interface. I'd like to support this and help stimulate its expansion. We need to do this kind of thing in on-going, long-range ways.

Certainly, we can't expect individual service centers to deal effectively with pinpointed research and evaluation questions, if for no other reason than the complexity of interacting factors in human behavior. The larger delivery system must take responsibility for this aspect of the program. The practice of requiring an evaluation component on each funded project has probably not paid off very well, for obvious reasons. It's hard to see how to make use of the small, disparate, noncomparable units of data which individual centers might collect, except to identify hunches that are worth further examination.

The relationship between what we are learning about young children and what we do in service programs needs strengthening.

One aspect of curriculum development that has always bothered me is its frequently haphazard relationship to what we know about children. I was, therefore, very happy to see in the paper from BEH on research planning, which is in your packet, a research strategy called "Research Integration." A little over a year ago, I directed a Special Study Institute entitled "Implications of Recent Research in Early Child Development for Special Education." Essentially, this institute was an attempt to help fill the gap between the recent accumulation of knowledge about young children and the translation of this knowledge into programs. One of the things we found in planning the institute is that very few people really know how to do this translation or integration. There are plenty of good developmental psychologists around who can tell us about recent research findings but they won't ever venture conjectures about the educational implications of these findings. Likewise, there are many good practitioners around who are floored when asked to develop implications from recently acquired knowledge. Service people and researchers speak different languages and have different values and goals. Practitioners get involved in the everyday lives of their pupils. They hardly have time to read about research, much less try to make use of it,

which they frequently lack the skill to do anyway. This is probably why there are delays, sometimes misapplications, and sometimes complete ignorance of new knowledge in service programs.

What we need to do is build in some mechanism for periodic (not one-shot) translation, probably via written documents supplemented by regional conferences or workshops. We need to identify and train more good translators and give them this job. We need also to call for and require new model projects to relate much more clearly to some body of knowledge about how children develop and learn than some of the current demonstration programs are doing.

We need more data about curricular approaches and methodology.

We need to know more about whether young handicapped children need primarily normal developmental experiences, but more of them--more stimulation, more opportunities for practice--like a nursery school but with a higher adult-to-child ratio; or whether young handicapped children need much more directed training--remedial experiences which are different in kind from what young, nonimpaired children need. Or, we need to know what combination of the two is optimal for which kind of children. With some children, such as the hearing-impaired, the nature of the handicap guides us in certain directions on these questions. With other children, such as the mildly-to-moderately retarded, developmentally disordered and emotionally disturbed, we are floundering in respect to these questions. Too many children are being hurt because of the vagueness of our thinking in this sphere and because of our loose attitude about this question. I'm thinking particularly about the children we call autistic, who are among our greatest failures in special education.

We have to think of service delivery systems in terms of research questions related to cost effectiveness.

We do not have unlimited funds to provide all needed service to handicapped

children, although the picture has certainly been improving recently. We need to ask whether it is cost effective to intervene with infants below six months of age or whether we would do better to use this money for more service between 9 and 15 months. Or whether we can more effectively use this money in working with mothers alone during this period.

We need to ask what amount of service, in terms of hours per week, pays off best with very young children. Perhaps with toddlers, two hours a day are as effective as four; perhaps three days per week are as effective as five, if there is a parent-training component in the program. Nicolas Hobbs, in The Futures of Children, asks a broader question which can be thought of in the context of cost effectiveness: Who should our service population be, children or families? Are we really treating the right client if we focus on the child alone, when we are thinking of very young children? In the context of a cost-conscious society, one of the recommendations of Hobbs' report was income maintenance as a basic treatment approach for families with handicapped children to alleviate the mutually destructive stresses of poverty and handicap on the family unit.

We need to identify and do some planning about gaps or discontinuities in our service delivery systems.

I was glad to see "needs assessments" given as one of the major strategies of the Research Division of BEH. An obvious gap or discontinuity is between programs for preschoolers and those available for six-year-olds. Recently I heard of a funded project in New York City where very promising gains were made with three-to-five-year-old severely retarded children. But when these children reached age six, the only facility available for them was a state institution. We may need to think about follow-through the way Head Start did. There are probably many other less obvious discontinuities which need attention.

An Ideal Service Delivery System

Now let's play a bit. Let's free ourselves from the constraints of budgetary limitations. Let's envision ourselves in a world where funds would be available for all needed services for handicapped children. What kind of service delivery systems would we want? I think we would advocate a coordinated system of services starting before birth. With free, dignified, and readily accessible prenatal care, potential impairments would often be prevented. Physicians would be required to refer for follow-up study any cases where problems in pregnancies or delivery might result in impairment in the child. Parents of newborns identified as handicapped or at high risk of being impaired would be contacted while still in the hospital or in the first month afterwards. Parent counseling, further child study, and the mapping out of educational treatment plans would begin at this point. One agency would assume responsibility for the long-term coordination of services for the individual child and his family.

What about such a system? Does it sound ideal? Are there any dangers? I propose that we try out such an ideal service delivery system or systems, based on the best thinking in the field today, in several communities, to find out where the kinks are. It's easy to blame problems in service delivery systems on inadequacy of funding, but even if we had all the funds we needed, how effective a service delivery system could we operate? Let's put ourselves to the test and find out.

Some of the possible kinks which would worry me are as follows:

1. We are moving more and more to models which include parents as teachers. What do we do when we come up against parents who can't assume this role because the whole experience of being the parent of a handicapped child is too much for them, or because they are themselves too disordered? Do we develop as alternatives center-based programs for young infants and let the parents out of their teaching responsibilities? Do the parents become our primary clients for treatment?

2. What is the effect on the family and on the parent-child relationship of identifying an infant as high-risk or potentially impaired? Certainly, if we are going to begin such identification shortly after birth, we will get plenty of false positives--that is, children who without special intervention would turn out fine. In the case of these children, and even in the case of those children who do turn out to be mildly impaired, what are we doing to the affective relationship between parent and child in the process of making this early identification? Are we injecting anxiety into the situation which will hurt the naturally forming bond between parent and child? If so, how can we avoid this? If we follow up this early identification with early educational intervention, how can we make sure that the intervention itself will not interfere with the parent-child relationship? Parents of severely handicapped young children, and parents of moderately handicapped young children whose impairments are obvious, are usually grateful for guidance in how to relate to their children. Is this going to be true as we move toward very early intervention with high risk or mildly retarded children; or will more of these parents see such instruction as an intrusion or additional burden?

3. We strongly advocate parent programs, and yet how many special educators know how to go about working with adults, and more specifically, how to go about working with parents? Traditionally, we have turned over responsibility for parents of children in need to social workers or psychologists. Suddenly we expect educators who have been trained to work only with children to know how to work with adults. Where is this skill to come from? Last year, I searched for training programs in this area to adapt for use in the special education program at Hunter College. I couldn't find any satisfactory, formally developed program to train teachers to work with parents of young handicapped children.

If we are going to press for something in service programs, we'd better make sure that we coordinate these efforts with similar developments in training

programs. This holds true not only for parent involvement but also for other new service program components, such as programming for infants and toddlers. Again we see a need for closer partnership within the special education circle, this time between service, development, and training.

4. If we serve only the handicapped child in infancy and toddlerhood in our educational programs, are we creating separations between the handicapped and the nonhandicapped right from the start? If so, what can we do to avoid this?

Some Final Questions

With mainstreaming on everyone's mind, my closing comment about research needs in relation to the early education of handicapped children has to deal with attitudes, not only the attitudes of teachers and other adults in the school but also the attitudes of young, nonhandicapped children toward handicapped children. What are we doing to find out about the reactions of nonhandicapped children of ages four, five, six, and seven toward the handicapped children we want to mainstream? How do the attitudes of these young children get expressed? How can we change these behavioral reactions, if they need changing? These are questions we need to work on now.

TASK 3:

Identifying Research Needs Relating
to Institutional Models
for Early Childhood Education
for the Handicapped

Remarks by

Irving Sigel

Center for Child Care Research
Educational Testing Service

At first I felt flattered by the charge to give this talk on institutions because it is not my area of expertise, as is child development. Then it occurred to me that after all, I was a graduate of an interdisciplinary program in which we were exposed to fields of sociology, anthropology, and psychology. The training provided a perspective--a way of orienting oneself to social science problems. Having lived through some institutions and having created another one here at ETS, I feel I can share my point of view in the context of institutions relative to program development.

What I want to do is to talk about institutions, not only as defined in the notes of the steering committee which focus primarily on schools, but as generic constructs, and deal with them as in an anthropological-sociological orientation. The reason is that we are not dealing with a psychological problem or an educational one. We are dealing with institutions as sociological and/or anthropological phenomena, which is not the usual way of thinking for those of us in education or psychology.

From my own experience here in the last day and a half, and from listening to people talk, the issue reduces itself to a child who is in need of something and a parent who is the guardian angel in search of the appropriate fountain of help. The search is to find the right agency and the right combination of social forces which will help that child who has particular problems. We need to examine institutions in that light. Let us just turn to a conception of institutions.

A Conception of Institutions

Think of institutions in a generic sense as referring to organizations or arrangements

which can be defined in terms of the unit of a setting. An institution, then, is some formal arrangement in our society which ranges from the family as an institution to the public school to the government to social agencies--all of these fit within a rubric of institutions. There are some characteristics common to all of these. They have some kind of mission and a cast of characters. I hate to sound like Watergate, but many of them have a scenario. But unlike Watergate, many of them have a tradition which, as we shall see, can create a major problem.

Studying institutions in the sense of systems is not new. Sociological studies of organizations have examined them from systematic perspectives. What I will do is to use that type of a model since we are talking about a system which is nonpersonal. I'm not talking about the unit of measurement or the concept as a person. I'm talking about it as an institution, an organic entity which transcends individuals. Every organization, of course, has personnel arranged in some type of hierarchical order. It goes from the leader to a lower-level leader, all the way down. An interesting book dealing with this (and one that you might find more personal by virtue of the content) is by Seymour Sarason.* In this book, he talks about the organization of settings and the future of societies. He has used his experience in the development of the Yale Psycho-Educational Clinic as his model, which encapsulates many of the issues that I think each one of us confronts in our particular activity when we think about institutions. Unfortunately, what Sarason did not do was to tie in the literature on general systems theory as applied to other organizations.

Let's take his notion of the setting as the core unit for our analysis. In a sense, we can define the setting in some manageable terms. I want to go through

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* Sarason, S. The creation of settings and the future societies. San Francisco, California: Jossey-Bass, 1972.

this to provide a kind of framework, or model, which I think will lead us to research questions which would be of interest to all of us.

The reason an institution is important is that it is the vehicle through which programs are carried out. It doesn't matter how competent its personnel are or how brilliant its programs are. The institutional settings in which the programs are placed will determine their effectiveness. The setting can facilitate or inhibit the execution of any delivery system. I'll tell you one anecdote. In Detroit, I did what I thought was a rather subversive research project when we decided to hire teachers as experimenters. If you hire teachers as experimenters, they have a vested interest in the experiment. If it works, a built-in sales force is already there; if it fails, it doesn't matter. So it was worth the gamble. I recruited the teachers on the rationale that I wanted people who were highly competent and who would quickly understand our procedures. Well, it was no easier and no more difficult to teach them than any other intelligent individuals. Since we had extra monies, I hired assistant teachers in the kindergartens, which was an added attraction. Anyway, the study was done and everything came out right. So I had my big day--I was reporting the findings to the supervisor of the kindergartens and to the divisional superintendent. I reported the results from the control groups and the experimental groups, plus the secondary findings, the teachers' enthusiasm, the kids' morale, and so on. After it was all over and everybody indicated enthusiasm, I thought "Well, now we're going to get the results incorporated into the kindergarten program." The program was for the "disadvantaged"--the poor kids in the city. After the discussion was all over, and I felt a sense of achievement, the supervisor, in a very quiet and genteel voice, said "It's very interesting to have heard all this, but it just indicates that what we've been doing all along in our program is exactly what you've been advocating."

I found that viewpoint very interesting but totally inaccurate. "But then how do you explain the difference between the control and experimental groups?"

I asked weakly. "For if the curriculum was the same, we should have had no experimental effects."

"Well, I'll have to discuss that with you later," she said.

What she was going to tell me was that the teacher of the control group was less competent. She forgot, however, that she had picked the teachers she thought were equivalently competent and we had assigned them randomly to the experimental and control groups. But that was not part of her view. So, in that setting, I had trouble. Our spies and our whole infiltration of the system were of no avail.

Decision Making on Three Levels

The moral is that the setting had built into it certain characteristics which precluded automatic success. Every setting has a leader and in this case it had that supervisory leader who I think was the spokesman for the next echelon. The next echelon also evaluated the supervisor. If our results were recommended as desirable, might this not reflect on the supervisor? We have a leader and then we have a series of core members in that setting. The leader has a designated role. We have to understand something about leadership roles, but not in terms of personality. (I've got to keep saying that because I want to get away from the psychological orientation and shift to a sociological one.)

We have a leader, then, and a core of people whom the leader may or may not have the freedom to select. The core people, as second echelon, find their own groups that they work with. So we begin to build a pyramidal system with the program director on top, then the core people, and then the lower-echelon people who may do the practical work.

With these three levels, you can immediately see problems emerge. First, where is the authority and autonomy at each level? How are these decisions executed? A series of appropriate social relationships designated by the role responsibilities has to be worked out so that decision making and responsibilities

are clear. What exists is the leader making decisions, maybe working in his own value system and his own role designation. All of these dimensions interact. Later there can be confusion when leaders believe they are democratic but in fact are not. It is deceptive, although not intentionally so. Some organizations do not allow for such decision-making processes. In any event, authority and responsibility assignments may or may not be explicit, but for effective institutional functioning, I believe they have to be. If the rules of the game are not explicit, a very significant problem in the effective functioning and morale of the group arises.

Since we are dealing with staff-line decisions, the question is: What decisions are made at what levels? What decisions can the core person make? For example, the program leader says "Okay, you are now the director of Project X. Go do it, but report to me every week on the progress of that project."

The core person comes in on a particular day and says "You know, I've done such and such."

"Hm, that's interesting," the leader says, "but it's not quite the way I'd hoped you would do it." So then the question arises of who has the authority and who has the responsibility.

Rarely do we make a priori contractual statements to handle such instances. One of the big errors that is often made is <u>not</u> designating <u>in advance</u> how we will cope with certain issues that arise. To recruit second-echelon people, the leaders tend to emphasize the positive: Everything is beautiful, everything will be lovely, and we will solve the problems. Sarason would call it "entering into a joint fantasy land." So one talks about the nice things, the excitement that's generated, all the things that happen, and the chances one will have to express oneself, how one will have a chance to find himself, to do his thing, and so on. What's not explained is that the only way one can accomplish all that is to buy into the system.

A relevant research problem would be to study settings in terms of formal and informal establishment of rules and decision making, to determine the factors that go into particular program successes and/or failures in terms of morale and execution of programs.

All of us know that there are explicit and implicit rules. One could then ask "Would it make a difference if we, in fact, had a more explicit contract?" It's very ironic that in education we make contracts the big thing. There's a contract with the student. If you do X, such and such will happen and I'll do X, and so forth. We write contracts for jobs, but the job contract is usually a title. You will now be Senior Program Director for so many years or at so many dollars. The question is: Who's the real boss? Where does the authority really rest? Sometimes it's clear, other times it's not. All of a sudden someone you never thought had authority says "We'd like you to do such and such." And if you say "no," you get the next statement: "But the president suggested you." One does not come right out and say "The president says do it." We're all so genteel and polite that we don't do that. But that gets us into trouble because the signals and cues are then miscues.

A research method that would be appropriate would be case studies. The problem is that many institutions won't let you do them, because when you begin to expose certain of the practices that are implicit in contrast to the explicit, there may well be a discrepancy. No one hesitates to give explicit statements of personnel policy code, but explication of rules poses a different problem. The essence of the organization may emerge and it may be difficult to accept this.

For most of us, the familiar unit within the institution is a leader and the core. Even the home is a setting which has a cast of characters--a leader and a power base, although the exact source of power is not always evident and seems to vary according to social class. Years ago, we did a study with working-class families

and found that the power seemed to rest with the mother. When the mother was interviewed and talked about her decision making, it seemed that she was making the decisions and was autonomous. But later we discovered that in reality it rested with the father who worked his power through the mother. They had their discussions at times. At some point, the mother learned what the father's wishes and values were. The mother was the executor of the father's point of view.

As we discovered, it takes more than observation and superficial interviewing to determine the source of power. This is not unique to families. Look at the settings in hospitals, universities, various kinds of social agencies, schools, public organizations, governments, and so on. It doesn't make any difference. In each case, we're talking about a unit of analysis that is manageable to study. If we ask the right questions, we will quickly note that settings have two levels: one, the overt defined administrative structure; the other, the infrastructure. These two may not be parallel. The relationship, however, must be understood, for if ignored, it could preclude understanding of the institution, particularly in regard to the effectiveness of delivery systems and/or programs.

We had an interesting experience in a housing project in a large urban community. We were trying to institute a child-care program for children under age two. We were getting nowhere. We dealt with the president of the PTA and someone else from the local church whom we believed had prestige. We were still getting nowhere. Finally, some very wise sociologist told us we were wasting our time. "None of those people is important, and the way you are approaching the problem, you'll never find out," he said. "You've got to find out from within."

There was a lady on the third floor who really was the power behind the whole thing. We eventually discovered this by just being around and visiting. Once we got to know the infrastructure power elite, the program took off. The PTA lady was very happy to see us there. She had always been happy to see us, but she was,

in reality, impotent. She could not get cooperation from her neighbors. Now everything fell into place.

I'm not saying that's the only way you can find out and that every setting has an infrastructure, but one must be aware that settings may function on two levels, and decisions have to be made regarding point of entry. I would act on the assumption that most organizations have a formal and informal set of rules which govern the behavior of their members. Eventually these rules may become autonomous in their own right. For example, one might say "At ETS we don't do that." Now what does that mean? Who is the 'we' who doesn't do that? It's not just ETS. We all say that. At our university, we don't, or this department doesn't. You wonder how and when such a rule became a practice. Practices seem to become functionally autonomous--that is, independent and unrelated to their original raison d'etre. Practices persist by themselves; their history is forgotten. New members never learn the history; yet every setting has a history. The period in the development of that setting, when one enters it, is very important. If one is among the early members of that history, one plays a different role than if one is a new member coming in, even though there may be no status or responsibility differences. One has to learn the do's and don'ts which are never completely explicit. In some cases, you learn that you just don't have coffee within certain sections of a place because that's not where people at your level drink coffee. It's interesting to watch how informal groups cluster in their own places. At one institution where I worked for several years, the secretaries had coffee in one place; the students in another place; and the faculty in a third place. And it has always happened that way.

"Why?" one asks.

"Well, that's the way we do it."

"What do you mean,'that's the way we do it?'"

"That's the way it's done."

"But who is the 'we' who made the decision?"

Actually, it had nothing to do with people at that time and place. Rather, it appeared as an arbitrary application of the rules. It did seem to be related to the people--a manifestation of what they thought were common interests. It also has to do with a built-in status hierarchy: How does a secretary talk to her boss in public? And how does she talk to him in private? These ritualizations are very prevalent and very powerful in determining who speaks with whom, who relates to whom, who drinks with whom, and so on. You can take that as far as you want [laughter]. I didn't say anything that would have to be X-rated, yet you all responded, so it was an X-rated comment. But that's exactly my point. There are a lot of implicit statements that we don't have to be explicit about and the same thing happens.

We have settings with infrastructures and overt structures. We have the second factor of the tradition which I was trying to talk about. Traditions develop and sometimes become autonomous and in their functioning they constrain as well as facilitate some things. They become a way of doing things in some schools. "In our school district, we don't do things that way. We always consult our parents." But you know, very often that's a ploy because if you look back, you find that a lot of times things are done without parents. So again you are faced with the problem of determining whether the carrying out of traditions is functional or is a way of not rocking the boat.

Before rejecting tradition and the history of institutional practice, one must be quite certain of the function of the tradition. It is possible that traditions, archaic as they may seem, have an important role to play. The form may be the same as in the past but the function may be new. Thus, to automatically reject previous practices without careful organizational analysis would be premature.

Role Differentiation

Let us turn now to a discussion of role differentiation. Institutions vary in hierarchical arrangements and mobility patterns. Vertical and horizontal mobility are usually defined by rules which tell one how to go up, how to stay still, and how to exist. At issue is how the members of that setting get to know the rules and how to behave relative to them. The rules of the game are often stated in objective terms. For example, tenure is given for excellent teaching, for high productivity, and for community service and university service. And if you get an A on all four, but have a big mouth and say the wrong things at the wrong time, somehow you are not seen as being cooperative, or whatever the X-factor is, and that, in effect, may make the difference between being in or out. You never have a chance to confront your accusers in those matters. I've sat on enough of those committees to know how they operate. They can be gossip sessions. They often pretend to be objective rating systems, but it's clear that when someone from one theoretical position reads the work of someone from another, it will not seem as good as if it were from his own theoretical position. The problem is that in all of these things, the roles that get defined in terms of what's happening become very important in determining the rules of mobility.

This now leads us to consider the procedures involved in allowing people to move up and down (promotions) and be different from one another. We have rules about decision making and what kind of decision making and about allocation of power. They're not necessarily the same thing. A secretary may make many decisions for her boss and appear to be very powerful on the telephone, when in reality she may not be as competent as other secretaries. So the end result is an expression of power and decision making in areas which may appear irrelevant to some matters but which become very important in terms of carrying out certain kinds of missions. For an illustration: You may want to see a superintendent, but

you find that he is unavailable--at least to you--and you give up your efforts. Yet his unavailability may not be his personal choice. He's just very busy. His schedule doesn't coordinate with yours. The assignment of power, to a secretary in this case, can be a very essential factor in decision making. That's why a lot of people have learned to court the superintendent's secretary instead of the superintendent.

So we have the distribution of power and the distribution of the decision-making sources. Certainly these become central variables and become our concern. Why? Because if we want to effect a change in the system, we have to understand where we enter the system to effect change. In doing so, we come up against a powerful and intransigent investment of control and power.

The other question that comes up concerns the setting's permanence and stability. Is it a setting that is fixed and tends to be so built into the system that it has little likelihood of change? If you are entering a school system, you will find a hierarchy of a certain kind. Entering that system is very difficult. One has to use some other kinds of extrasensory wisdom to find out how to manipulate it. Some systems are tentative, and their life is fragile. This situation alters the power of the members in that setting but it may strengthen the position of the outsider who wants to effect some change because members may interpret the outsider as a source for strengthening the setting. The issue is how a fragile group seeks to strengthen its position.

Settings are created to fulfill a mission, but once a setting is created, there is a desire to perpetuate it. For example, I have this nice little center for research here, and chances are that when our initial mission is fulfilled, we will piggyback on it so we can keep going. This is a common survival game. Some of us who have projects which are externally funded have learned how to play this game to the hilt. The idea of trying to find out what the mission of these settings is and how it relates to all these other factors discussed is another research

question. These are factors which in their composite create a kind of unity for a setting. A mission, a cast of characters, and a tradition to create a kind of molded outfit that's going to function are all necessary for a setting to emerge and survive. In essence, a setting or an institution can be viewed as an organism--a living dynamic system.

If these settings emerge with a tradition, if they have this mission and all the other things I attributed to them, they begin to have their own self-perpetuating wisdom and self-perpetuating justifications, which may or may not be in tune with the times. This leads to the problems of change which were identified earlier. How do you get settings to change? Are there certain rules within the setting that are independent of people, that prevent them from changing? The answer is yes. One set of controls is legalism. Laws are passed by appropriate bodies which define settings and enable them to exist in perpetuity unless someone changes the law. That's not an easy thing. The whole business of legalizing certain kinds of issues which we have faced in recent years (mandating through law racial integration, mandating through law mainstreaming) begins to create perpetual settings. The option for change, irrespective of quality, gets very difficult. I'm not taking a position one way or another against these two examples but once they get mandated, the settings get ossified into systems, especially if the constitution that's written for those things is so hidebound that it allows for no flexibility of interpretation. Had our own Constitution been written and interpreted literally, we'd have had trouble. We did have trouble in the early days, if you recall. Then there was this whole issue of how you interpreted it--as a strict constructionist or a loose constructionist. To accomplish a flexible interpretation requires some kind of agency. This is not a usual situation. Without a bona fide change agent such as the Supreme Court, practices and roles remain.

What are the research issues? One, I think, is to understand in these settings the interaction between the setting and the institution. We can look at the types of settings in hospital units, the types of settings in schools, the types of settings in other places. In the schools, as an example, we can ask "What's our unit setting?" It can vary. It can be the school building itself or subunits within that building or subunits within subunits in that building. That is, the unit has to be defined in terms of what its function is. In some elementary schools, it's pretty obvious. There's the principal and the cast of characters--the teachers and the clients, the kids. The kids have no input into the system, and the teachers may or may not, depending upon how large the system is. The way you work with a school system is to decide where the power and the distribution of power are and at what level and to what ends. But we need the identifying characteristics. In other words, both the description of the things that are in that system and how important these things are and what they do to the system. And I think we can only do this in terms of some systemic analysis of what's happening.

Now we can take this across settings if we wish; it depends on what our interests are. One could look at social agencies as one type of quasi-public agency not administratively tied to education systems like boards of education. These will vary in terms of their organic orientations and organic structures. Comparing different agencies in terms of specified criteria would be of considerable value in learning how programs are initiated, developed, and implemented. Using criteria that would be meaningful for each setting, comparative studies could prove very informative--particularly in reference to coping with program implementation. Carrying out such investigations would provide an understanding of how institutions develop, how they continue to live and thrive. I think the notion of quality of an institution, sort of developing its own life independent

of who the members are, is something that has to be looked at. You know, reputations build up slowly in education and die equally slowly. The first half I can appreciate. The second half is a tragedy.

If we can describe some of the critical characteristics of a setting, then we should identify things in terms of the organization's systemic characteristics, the relationship of segments one to the other. This again, I think (and I may be wrong), requires a kind of sociological or anthropological analysis in which one begins to look at these institutions from constructs that are not familiar and are not part of our own training. Most of us do not have the constructs either to view institutions or even to suggest alternative directions to new ways. For example, the members of a department have low morale and want a new chairman. "That guy is doing this wrong and that wrong," you grumble. "If I ever get to be chairman, we're not going to have any of that nonsense. We're not going to do this and we're not going to do that." You get all your constituents to vote for you. So you become the new chairman but after about three months, nothing has changed. Labels may be different--you may meet now on Thursday instead of Monday--but nothing else has changed. All is where it was before.

Why don't things change? When you offered change, you weren't being dishonest. You really said what you meant to say, but the point is that constraints become evident which previously were not realized.

Another example: As a student, you may have said "Anyone who marks on a curve is really vicious. It's a terrible system." So you get your Ph.D. and you run off to your first teaching job and you see 400 sleepy faces at eight o'clock in the morning and you have to give them all a grade. What's the best way to do it? "I'll give them this multiple-choice test," you say. "I'll throw the results in the computer and I'll draw lines and you get an A, you get a B, you get a C." So you're right back in that system you once disparaged because you claim the system doesn't allow you any options. So the question then becomes: How do we get people to consider alternative models? There are alternative ways of running

that department. But the constraints of that setting preclude alternatives. They can be legalistic or they can be traditional. Or perhaps it's really that when you scratch each of us, you find an authoritarian.

We should try to discover the correlation, the template relationship, between the overt formal structure and the infrastructure. What is the degree to which one overlaps the other? That gets to be an important kind of correlation because if you are out to effect change, you may begin to find out that you're wasting your time at one level or you're working at that level because you know that will lead you to the basement where the truth resides.

Summary

We have to know about decision making within the structure --where the power is and how it's distributed. Secondly, we want to talk about the constraints which are there and from whence they come. Thirdly, systems will change only under some state of disequilibrium. If everybody is happy and everything is peaceful and they go bouncing along, no one is going to do anything. Why rock the boat? Well, how do you rock the boat and why do you want to rock the boat? Is it because services presumably rendered by this organization are ineffective? Or they're doing things which are inimicable to the public good or public interest? Or perhaps they are not meeting the needs of communities. There's an array of possibilities. The essential thing is the system isn't going to change unless there is some force which is going to create this disequilibrium. If we're out to effect change, even from within, we have to have an array of information with which to decide what kinds of change we want to create. That's going to depend on where we are in the decision-making hierarchy. You can come in with a great idea to an administrator who is about three grades above you because he has an open-door policy. "That's very interesting; it's fantastic," he may say. "Send me a memo. Do it right away." A year later you meet him at a cocktail party and he may say that it was a very

interesting memo, but he just couldn't implement it. Well, that does a lot for your morale. But the point is, there are various stalls. Some people I know of who have been concerned with some of these issues have been people in certain areas of community psychology who have been working with school systems trying to effect certain changes by creating disequilibrium. That's one professional group that has paid some attention to effecting change.

Finally, I keep referring to change. I'm not advocating change for the sake of change, but I think all of us are here because, in some sense, we are aware of the discrepancy between something that is and something that should be. There is an expertise that may be able to alter the existing system and effect modification of that system so that the outcome is related to what is needed. We are here to talk about research, and with these comments of mine I hope to set the stage for research in the systems that are engaged in organization around the execution of services, around the adequate utilization of personnel, around meeting what we believe a child needs. This is an area of expertise that really belongs to a profession which has that definition and its mission. Now I don't mean to say that psychologists or educators or whoever should avoid developing evaluation or institutional settings, but I think we do need a certain amount of humility before moving into areas where there is a particular expertise. I do not believe we have that. We know something that keeps us going from day to day in our job. But I think in this area where we are looking at a very different phenomenon, the phenomenon of sociology of organization, we must incorporate that expertise so that we can discover how our settings become a force that impinges and inhibits or sometimes facilitates our own delivery of service.

TASK 4:

Identifying Research Needs
Relating to Personnel Development
for Early Childhood Education
for the Handicapped

Preparation for Specialized Roles in Early Childhood Education for the Handicapped

or

Who Prepares Whom to Do What?

Winifred H. Northcott
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My assignment here is to discuss the preparation of tomorrow's specialists in early childhood education for the handicapped and identify certain parameters and major issues.

I approach this assignment as a consumer with no first-hand knowledge of the political, administrative, economic, or philosophical machinations which may be a reality within the university from which preservice and professional growth programs have traditionally emanated. Therefore, I am not able to judge its ability to respond to the challenge of preparing tomorrow's hybrids who will close the gap between professionals and paraprofessionals in early childhood education and special education. My experience has been as a direct-service special educator and administrator in a variety of educational settings: residential school; public school (self-contained class and resource room); community nonprofit agency; state department of education.

The definition of development suggests an attendant spiraling and evolutionary process: "to cause to grow and expand; to bring to a more advanced or effective state." Personnel preparation (and I use the term personnel in the generic sense of including all qualified individuals who play a role in the provision of direct or indirect educational services to preschool children who are handicapped) is, I think, a matter of relevance and relativity. But what it's relevant and relative to, I'm not certain. It reminds me of the story about James Thurber who, when asked "What do you think of marriage?," is reported to have answered, "Compared to what?"

A consideration of the process and content dimensions of personnel development requires first an examination of some major forces which impact upon them.

The Prevailing Political and Social Climate Today

There is increased support today--in state legislatures, among advocacy groups, and in professional organizations--for the concept of early childhood education for all. The initiation and expansion of early intervention programs for all infants and preschool children with special needs is a stated priority for federal dollars. State legislatures have responded by reducing the minimum age required for entrance into a public school infant/preschool program and appropriated funds to permit the same pattern of state special education aids to obtain for these services as for handicapped children of formal school age (HACHE Project, 1974).

U.S. Commissioner of Education Terrel Bell, Edwin Martin (1974), Associate Deputy Commissioner, Bureau of Education for the Handicapped; Albert Shanker, President of the United Federation of Teachers, and members of the Early Childhood Task Force, Education Commission of the States (1971) have advanced the premise that the local education agency (school district of the child's residence) should bear the primary responsibility for early childhood education services, subcontracting with private and nonprofit community agencies as appropriate. Thus, the school building, the community, and its resources, are each considered potential stations in which learning may take place during the early childhood years.

Any bill of rights of children today includes a statement about equal educational opportunity for all. The retrieval terms relate to due process; zero reject model; and the latest cliché, "least restrictive environment."

The rights of parents are also central to a consideration of the nature of personnel preparation. They include the right of a handicapped child to be educated in a community educational program permitting active home-school involvement in preference to institutionalization and residential school care. Parents have the right to participate with school personnel in the major decisions affecting their child, including the educational setting in which he or she may be placed.

Agency Sponsorship of Direct Service Programs

Currently, educational programs are available to certain types of preschool handicapped children under a variety of agency sponsorships: public schools; state, federal, local agencies; universities; hospitals; and medical centers. It is important to note, however, that the sum total of children served under the Handicapped Children's Early Education Program, Head Start, P.L.89-313, and Title VI-B in 1974 was 130,000 (Ackerman and Moore, 1975). In contrast to this figure for children in the "stimulatory" federally funded programs, one finds 224,000 children enrolled in local chapter service agencies of three major private organizations: National Association for Retarded Children, National Easter Seal, and United Cerebral Palsy. Only 40 - 60 percent of the projects of the Handicapped Children's Early Education Program are public-school based. Most intra-agency in-service training programs bypass formal course credits and the notion of degrees for training received. For example, staff members of Head Start programs, which are under the sponsorship of the Office of Child Development, are oriented to continuing educational growth through the career development ladder which is not degree-based. In a further effort to upgrade the quality of child care and early education, experts in the field of child development and in early education, in cooperation with the Office of Child Development, have formed a Child Development Associate Consortium, Inc. and developed a set of competencies (knowledge, skills, attitudes) which describe an individual who is "qualified" to work with young children as a Child Development Associate under a "master teacher," whose functions and qualifications are not defined.

Question: Let us say the local education agency assumes the role of case manager and coordinator of early childhood education services for handicapped children residing within its district and contracts for a portion or all of the program for a particular child. What control exists over the qualifications of personnel in the community programs or their certification requirements, both initial achievement and periodic updating?

Question: Will representatives of these major community-based private and public organizations, as well as those from private day-care programs, industrial day-care programs, private schools, nursery schools, and Head Start programs be represented when consumers and teacher trainers meet for the planning and implementation of teacher preparations programs, both preservice and in-service components?

Antics With Semantics: Changing Definitions

The traditional medical labels for a child's handicap have limited usefulness in predicting a child's daily performance level. The individualized program should be determined not by medical etiology but the developmental and behavioral needs of each child who is enrolled.

A handicapped child, according to the behavioral definition, is one whose educational and/or developmental deficits and behavior cause him to be seriously out of phase in the acquisition of skills in four major areas of essential life tasks: communication, psychomotor, cognitive and social/adaptive (State Guidelines, 1974). Keeping to this current interpretation of groupings of children by examination of their current skill repertoire and determination of reasonable performance goals for each, one finds that the majority of projects funded under the Handicapped Children's Early Education Program(P.L.91-230, Title VI. Part C, Section 623) identify their population as "mixed" or multicategorical in composition. The interpretation of who is handicapped varies according to agency sponsorship. In the instance of public school infant/preschool programs, the legal definition of handicap generally is equated with a medical label: deaf, blind, mentally retarded, and so on. In contrast, under a different and nonpublic school aegis, a broad interpretation of "who is eligible" would be based on such variables as environmental factors, socioeconomic level, and cross-cultural patterns leading to predicted vulnerability to later educational failure. The programs sponsored by public schools are tied to eligibility

requirements for special education foundation aid, a portion of staff salaries, supplies, and equipment.

Similarly, the definition of early childhood education is undergoing transformation. Educational intervention includes not only the traditional components but also environmental modification to produce better growth conditions and medical intervention following assessment of the degree to which a child is physically intact for optimum learning. The presence or absence of a stimulating growth and learning environment in the home is still another critical source of potential developmental lag to be treated in a comprehensive program. Each of these dimensions has implications for the numbers and types of personnel who are in training, to be retrained, or considered for training in the future.

Present Models of Educational Intervention

An examination of the models being developed under the Handicapped Children's Early Education Program (First Chance Network) indicates that they are so labeled not in the sense of being exemplary but as offering a way rather than the way to intervene in the life of a young handicapped child by enrolling that child in a program which has internal consistency as far as goals, objectives, activities, and a formal evaluation plan are concerned. (Evaluation, by the way, is for the purpose of improving, not proving, the superiority of the model in operation.) Each model is considered open-ended, tentative, and exploratory, and staff members in these demonstration projects are in the enviable position of becoming more competent specialists in their daily interactions with children and parents because they are, at the same time, serious students eager to make use of in-service agency training funds to remediate their identified areas of low competency.

Ackerman and Moore (1975) point out the amorphous nature of "models" of child intervention currently available for examination in the Handicapped Children's Early Education Program emphasizing the fact that their parameters are not discrete and

that there is an overlap of techniques among them. The present state of informality in model definition brings to mind the story about the French general who was dining with his soldiers. Suddenly, they stood up and rushed out of the hall. "Quick," said the general to his aide-de-camp, "find out where the troops have gone so I can lead them."

Lillie (1975) identifies existing models along a continuum ranging from informal, with social-emotional emphasis, to the formal (cognitive emphasis). Mayer (1971) identifies four major models based upon theoretical approach, roles of teacher and child, and curriculum characteristics. Ackerman and Moore remind us that in the First Chance Network, no common vocabulary can be found which designates the models clearly, nor do evaluation schemes exist to determine the effectiveness of one model over another. The authors identify these critical variables, among others, which must be considered if a "model" is to be considered for replication: handicapping condition, physical location, targets of training, intervention models, and administrative units.

Specialized Roles and Positions: Commonalities across Preschool Programs

Any consideration of an educational program for special-needs children of preprimary age must involve parents in the teaching/learning process. There are two stages of support.

First level of Intervention--Infant years, Parent-oriented, Home-centered Program: Birth to 36 months (extended age range due to late diagnosis and entrance into a formal program). Parents are considered the first and primary pupils, and mandatory parent involvement assumes joint determination of the program content by parents and staff. There is attention to both the instructional and affective aspects of a parent's role as mother or father of a handicapped preschool child, with focus on the varying responses as an individual, marriage partner, and practitioner in the art of parenting. The role of parent adviser requires skill in coping with the reality of chronic sorrow experienced by families upon the birth of a defective child. Through a home, home/center, or center-based program of support, parents are assisted in the development of coping skills as well as confidence and competence to structure the home environment so that appropriate sensory and learning experiences occur within the nuclear or extended-family domicile.

Second Level of Intervention--Child-centered, School-oriented Program: Thirty-six months or so to the age of mandatory school district responsibility. The program of parent support (guidance, counseling, and parent education) continues and a component is added: placement of the child in a school or community group educational program. Individual instruction of each child is a supplement to the group activities and involves active parent participation.

A Multidisciplinary Team Serving the Family and Child: An open-ended list of considered specialists would include: occupational therapist, physical therapist, social worker, family life specialist, nutritionist, specialist in early childhood education, psychologist, foster home or natural parents, pediatrician, family doctor, child development specialist, communicologist.

Placement or Integration of Most Children in a Group Educational Program Operated Primarily for Nonhandicapped Peers: A preferred option for competitive learning.

Recognition of the Partnership Which Exists between Program Personnel and Parents: A colleague of mine, Dr. Kevin Murphy, explains that the parents are the authority on their child, and the school personnel are authorities on various aspects of amelioration of the handicapping condition(s). This implies a kind of noblesse oblige for all concerned; for every right, a corresponding responsibility jointly shared.

Who Are the Personnel in Direct Service Early Childhood Programs?

Traditionally, the early childhood educator provided the daily learning environment for a group of preschool children in a formal educational center. Very few of the children were handicapped. Under the present philosophy of the "least restrictive environment" for handicapped children, a single individual can no longer develop

or offer adequate support to the child and his parents, regardless of the range of his or her competencies. Thus, there is a need for some new classifications of professional personnel and others for preservice and professional growth training:

- General educators in early childhood education who must accommodate children in their public and private early childhood programs who have special needs
- Parents of these children
- General administrators who must develop an independent frame of reference about the wide range of behaviors exhibited by children who all too often are stereotyped as "the deaf" or "the blind" or "the retarded" and assumed to possess a single set of characteristics, remanding them to a single educational setting (usually self-contained)
- The medical profession and health care deliverers who give indirect service to the young child who is handicapped

I think of this conversation between a parent and nursery school teacher, on the first school day in September:

Teacher: I'm willing to accept him in my nursery, but I've never had a hearing-impaired child before.

Parent: That makes two of us then. I never have either.

Tomorrow's Specialists: Who Does the Training?

Historically, in preservice and in-service programs involving units, prescribed courses, and formal degrees, the classical authority has been the university. The department of special education has traditionally provided the faculty, and the state department of education in each state has served as the certifying body. All too often practicum has been oriented to one disability population involving one role, one model, one educational setting (of self-containment). Today, the scene is radically different

in the area of handicapped children. Ackerman and Moore (1975) in reporting figures released by the Bureau of Education for the Handicapped, Division of Personnel Preparstion, indicate that approximately 90,000 teachers sre required to educate the existing one million preschool handicapped children in the United States today. Since only 35 percent of these children are currently being served by 31,500 teachers, the remaining need is for an estimated 58,500 teachers to support unserved children of infant and preschool age who sre handicapped.

Under Title VI-D "block grants" to universities, of the Elementary and Secondary Education Act (ESEA), a total of 356 students were trained in early childhood education (227 full-time; 129 part-time), in 1972-73, primarily in graduate rather than undergraduate studies at the preservice level. The discrepancy between existing personnel required and numbers graduating nationally makes one think of the Dutch boy with his finger in the dike.

When one considers the arena of in-service training, a different psttern emerges. Every demonstration project under the Handicapped Children's Esrly Education Program (HCEEP) has training monies built into its budget. In FY 1972-73, approximately 20,000 individuals (Head Start staff, public school educators, dsy care and nursery school volunteers) received training; 2,580 in practicum through universities and colleges. Thus, service agencies become the teacher trsiners, within a particular curricular model, for the purpose of quality control of that model and its widespread dissemination. It is not possible to determine whether this in-service training is coordinated through a university or college and its continuing education program or offered for professional growth credits which have the status of "currency of the realm" only within the district, agency, or institution as far as advanced professional position or salary increments are concerned.

Other agencies involved in the delivery of early childhood education progrsms for the handicapped include the plentiful group day-care programs, whose quality is governed by day-care license procedures of a particular state. The significant lack

of uniformity among the states is highlighted by the fact that 25 states fail to specify educational requirements for their day-care teachers; 9 states require a minimum of high school graduation, while the remaining 16 specify some college or equivalent experience.

Another significant set of programs is the Head Start group under the Office of Child Development Office of Economic Opportunity. Head Start and Technical Assistance funds are not necessarily earmarked for retraining of staff to support children with special needs. This is also true of private nursery schools and community day-care centers which have no mandate to accept children with special needs; furthermore, funds for continuing education must be paid by individual staff members without reimbursement.

One clear example of decentralization of personnel training so prevalent today is Environments for Young Children, a course offered in Minneapolis (by the same personnel in several instances) as a university undergraduate program, by the YWCA as a community adult education course, at a community college, for credit, several suburban adult education programs, and as a miniseminar by a professional association.

Clearly, our mandate as leadership personnel is to actively pursue the role of child advocacy in the case of the young child who is handicapped, in addition to attention to personnel development in the programs in which he/she is found.

Contemporary Premises Undergirding Personnel Development

At the dedication of Thorndike Hall, Columbia University, Edwin Martin (1973) urged an end to the notion that handicapped children are a small, discrete population and acceptance of the concept that the learning needs of all children fall on a continuum of severity which focuses attention on the central processes of learning and teaching for both general and special educators. We are no longer operating special education vacuum cleaners, sweeping up all exceptional children and depositing them in a single educational setting, usually in isolation. The differential placement of children with special needs has contributed to the breakdown of attitudinal barriers

and stereotypes concerning "the retarded" or "the physically handicapped" and recognition of specialized labels and roles for educators newly identified--such as "consulting resource teacher" or "communicologist" in preprimary programs. If educational options are to be available to children who are handicapped, preschool teachers must expand their range of competencies to respond to an increasingly wide range of behaviors in the average classroom and recognize that the delivery of services may be sponsored by the local education agency or another community sponsorship in the private or public sector. This climate of current service delivery systems places the university in competition in the open market for available training dollars. Similarly, it means that teaching personnel are accountable for the success with which they apply those competencies (skills, knowledge, attitudes) which enable every young child to learn.

The missing links in the systematic process of preparation of new teaching personnel and the retraining of others in a program of continuing education would include:

1. Identified educational needs of young handicapped children and parents
2. Clearly defined roles and responsibilities of professional/paraprofessional positions for which individuals are to be prepared
3. Statement of the competencies (skills, knowledge, attitudes) expected of individuals in those well-defined positions
4. Consideration of the measurement of entry and exist-level skills; standards and conditions for acceptable evidence of added competencies

Performance-Based Teacher Education

We are currently in a transitional stage, moving from a conventional system of teacher education and certification to one that is competence- or performance-based. No longer will the state education agency review individual transcripts under such a change. Instead, the preparatory institution will recommend certification by the

state education department on the basis of an approved program. It is the process in which institutions of higher education engage in developing a program proposal to be submitted for state approval, to which the staff of a university, local school boards, and teachers must currently address as a first step toward development of competencies needed by teachers of preprimary handicapped children and evidence that teachers have achieved them.

The current state of the art is not advanced, as far as performance-based teacher education is concerned. While there is recognition of differentiated staffing patterns, there is no consensus on the kind of work, performance, behaviors, and attitudes expected for each. Consider the family life specialist; the program coordinator; the child development specialist, for example.

The Guidelines (1974) developed by the Professional Standards and Guidelines Committee, Council for Exceptional Children, are process rather than product (content)/ oriented. Their focus is on the process of making decisions on curriculum content, methods of instruction, and the nature of participatory learning experiences. The recurring theme is that no single university department has sole proprietorship of the resources (physical and human) for orientation of early childhood education specialists to special education, genetics, linguistics, educational psychology, child development. In the development of comprehensive responses to the needs of preprimary exceptional children, all available professional talent within a university must be "tapped" to offer needed kinds of specialized training.

The CEC Guidelines suggest a generic description of a "preparation center" which includes but is not limited to universities, state departments of education, local education agencies, and professional organizations conducting any kind of preparation activities in special education. This concept dictates coordination of planning efforts.

First Step: Needs Assessment

The focus today upon field-centered, competency-based, consortium-planned teacher education programs has given rise to formal realignment of individuals and institutions in order to validate the content of teacher-training programs and modules against the needs and attitudes of consumers. These individuals include unemployed baccalaureate degree elementary education teachers, the result of massive dismissals in the United States, as well as preservice individuals and nondegree personnel.

Schmieder and Yarger (1975) report there are some 4,500 teaching centers in existence today, either mandated or voluntary consortia composed of university faculty, administrators, members of local school boards and faculties, with joint responsibility for program development. It is recognized that if any basic change is required in personnel preparation, teachers must play a major role in such change.

In the implementation of a needs assessment, four major types of roles can be identified. Each requires a certain set of skills, knowledge and attitudes (competencies) which must be agreed upon. The roles are: academic, developmental, ameliorative, and administrative.

The constructs of the early childhood education teacher-education program flow from the totality of human resources at a preparation center. At the University of Minnesota, for example, one finds the Center on Early Education and Development, which is an organizational and administrative arrangement trans-departmental and trans-disciplinary in nature. Here, the whole is greater than the sum of its parts. Only through such centrality of focus, with the disciplines that are required for early childhood education service programs (sociology, child psychology, family life, home economics, physical education, health education, and mental health), can role differentiation be a realistic goal in personnel preparation and subsequent criteria and standards for measurement of competencies be established.

Specialization in the Learning Process

A certain generic core of learning experiences or a knowledge base is required of all personnel in early childhood education with application through site visitation as appropriate. This would include the characteristics of young children, the ways in which they learn, normal child growth and development, language acquisition, and the roles parents play.

Beyond the general set of competencies for all personnel, including attention to attitudinal and conceptual barriers, selection of a specialized role by an individual will determine differentiated training, including practica (participatory learning), with these dimensions:

- observation; site visitation
- supervised parent interviewing
- home visitation
- precision teaching
- participation in research
- experience in a micro-teaching center
- individual and group parent guidance and counseling
- behavior management
- inbasket simulated procedures
- integration procedures (mainstreaming)

Summary

Personnel development is a mercurial and amorphous topic. In past years, the traditional overspecialization by disability has left us ill-prepared for today's challenge...the organization of training programs for personnel development which will retain the newly emerging concept of decategorization without losing the political support to categories by advocacy groups.

Without continuation of extensive federal funds as "seed money," the service agencies enrolling young children who are handicapped will, of necessity, relinquish their heavy inservice training role as increasing numbers of early childhood education programs are initiated and expended under public school sponsorship.

Training in the future will be not for a model of curriculum and service delivery but for specialized roles requiring adjunct personnel from the community as lecturers and supervisors of practicum who can apply their first-hand knowledge of individualization

of educational services for young children, as well as traditional university faculty.

The question of "Who prepares?" as related to personnel development is up for grabs. The flexibility of a university will determine its relevance to 1975 personnel preparation requirements in terms of the content offered, mode of delivery and labels of trainers, site locations and agency/institution sponsorship. The challenge for the future includes preservice and in-service orientation of early childhood education, child development, and family life specialists who are central to the emerging need for individuals to assume the role of functional psycho-educational diagnostician using the basic mechanics of several models as a frame of reference which can be adapted to any new setting and population of preschool children including those with special needs.

The process for discovery of self-limitation has been identified; the mechanism for re-evaluation of personnel preparation programs--a working partnership of trainers and consumers--is being utilized. From these activities of mandated and voluntary consortiums will flow the competencies for each specialized role required to provide alternative educational settings and instructional content for children and the evaluation plan to measure achievement.

We have the title of the play, "In a State of Flux", relating to personnel development. The featured and supporting members of the cast have been identified. Who are the patrons? Who is the director? Who are the critics? To what extent shall we change the theater of our actions?

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RECOMMENDATIONS

RECOMMENDATIONS

The conference participants were asked to consider the special needs of young handicapped children and to identify the most important needs for research in early childhood education. They focused their attention on each of four major topic areas: child characteristics, service delivery systems, institutional models, and personnel preparation. The participants were divided into 10 working groups to consider each topic area in order, listing all needs for research that came to mind, selecting those considered to be most critical, and then spelling out for each of those critical needs the rationale, possible research approach, and potential uses of the research findings.

The final task was to consider the total pool of needs submitted by all conference teams, to reach consensus on the four or five most critical needs in each area, and then to designate the one top-priority need for research related to early childhood education for the handicapped. The conference topic was so vast and the focus areas so interrelated, however, that the participants were not willing to isolate a single top-priority need in each area. Consequently, the conference format was restructured to permit a more limited concentration. At the last working session, each participant was asked to work with one group on one of three topic areas (child characteristics, service delivery systems and institutional models, or personnel development). As a result, there were three group reports presented at the final conference session. These reports are summarized on the following pages as the Top-Priority Research Needs.

The research ideas generated by each of the 10 groups before the final

working session represent a valuable source of research needs related to the education of young handicapped children. From these reports there emerged critical questions that can be addressed through research and, in several cases, specific recommendations on how that research might be conducted. A summary of these questions and recommendations, presented as Additional Research Needs, begins on page 82.

The topics included in Top-Priority Research Needs and Additional Research Needs are not listed in order of priority.

I. Top-Priority Research Needs

Child Characteristics

A major concern of the participants was that the assessment process must take into account the child's interaction with his environment whether the assessment includes measurement or observation or both. The assessment is valid only in context; i.e., it must recognize that children use different strategies to achieve desired goals.

To understand more fully the handicapped child, the group recommended four major research topics:

1. Investigate how the child uses a variety of problem-solving strategies to cope with meaningful problems.

   What adaptive strategies does he use to cope with academic demands? With social demands? To develop self-help skills? Noncognitive skills?

   - Consider the affective and social contexts in which these strategies develop.

   Does the child use different strategies in different settings?

2. Develop systematic measurement strategies to assess how children interact with varying environments, recognizing that there is more than one right behavior pattern.

   What aspects of problem solving do individual tests (such as Stanford-Binet and WISC) measure?

   How can combinations of existing measures be used to report how children solve--or fail to solve--problems?

3. Study sets of interrelated competencies that children demonstrate when they use different behaviors in different ways in different settings and formulate models of child development taking into account differences due to varying handicapping conditions.

   - Conduct a literature search.
   - Develop observation schedules to identify variables that are related to the child's performance characteristics.
   - Perform controlled studies on patterns of interaction.
   - Relate study findings to curriculum, instruction, and institutional settings.

4. Develop and validate procedures to identify at a very early age those children who have, or are likely to develop, handicapping conditions.

It was the group's specific recommendation that the Bureau of Education for the Handicapped develop strategies for comprehensive and interdisciplinary research.

Service Delivery Systems and Institutional Models

The group that attempted to identify a single top-priority need for research on this topic was reluctant to synthesize the critical needs reported from previous sessions. It reported instead the following 16 individual recommendations with the caution that each was of equal importance:

1. Determine the service needs of handicapped children and their families. What interventions are needed? When?
2. Determine what delivery technologies are appropriate for which services.
3. Develop service delivery systems and institutions to involve hard-to-reach children and families.
4. Explore institutional parameters in order to identify the strategies needed to introduce, implement, and maintain innovative programs in relevant institutions.
5. Assess the characteristics of the institution or family that provides effective care for the exceptional child.

6. Compare institutional parameters as they relate to the feasibility of various programs of service delivery and to child and family outcomes.
7. Undertake careful and complete program development within program models.
8. Compare various models for efficiency.
9. Conduct retrospective analyses of clusters of how existing programs relate to child and family outcomes.
10. Describe existing service delivery systems in terms of types of services, types of delivery systems, and types of settings (e.g., institutional goal structures and the relationships among institutions).
11. Develop program evaluation techniques such as internal accountability data systems, process methods to characterize programs, child and family outcomes, and cost effectiveness methods.
12. Identify variables that characterize full delivery systems. Compare delivery systems by types of service, delivery systems, and institutional variables. Compare outcomes and characteristics of delivery systems by variables such as: cost, physical setting, agency sponsorship, techniques, media, comprehensiveness of service, integration of handicapped and normal children, parental involvement, parent styles leading to risk taking by children, and replicability.
13. Develop models for the integration of services.
14. Develop strategies for referral and coordination between medical and educational agencies.
15. Conduct research on strategies for the dissemination of information and utilization of knowledge.
16. Carry out longitudinal evaluation studies.

Personnel Development

The group discussed the development of personnel who will work directly with young handicapped children and those who will train such personnel. The participants identified four top-priority needs for research:

1. Identify and analyze what competencies are needed by trainers.

2. Develop effective alternative training models.

   What are optimal trainer/trainee ratios in competency-based training programs?

   What models of cooperation among institutions will facilitate better training?

   How do existing alternative models of personnel training compare?

   Can training programs be validated against the needs and attitudes of consumers?

3. Define the specific skills needed by personnel in different settings and across different disciplines.

   What retraining and reorientation are needed by personnel for new roles indicated by mainstreaming and new mandates?

   Can methodologies be developed to determine what competencies are needed by personnel who work with different age levels, in different settings, with children with different degrees of handicap, and with access to different kinds of resources?

4. Determine the numbers and types of personnel at the national, regional, state, and local levels in terms of the numbers and types of children to be served and the numbers and types of settings.

Research questions posed by the group were:

- What are the cost factors related to personnel development and career ladders?

- What data are needed for making decisions about related support services such as teacher/child ratios and how to organize classrooms?

- How can institutions be helped to respond more quickly to new training needs?
- How do institutional issues such as unions and tenure affect the organizational hierarchy and the functioning of programs and personnel?

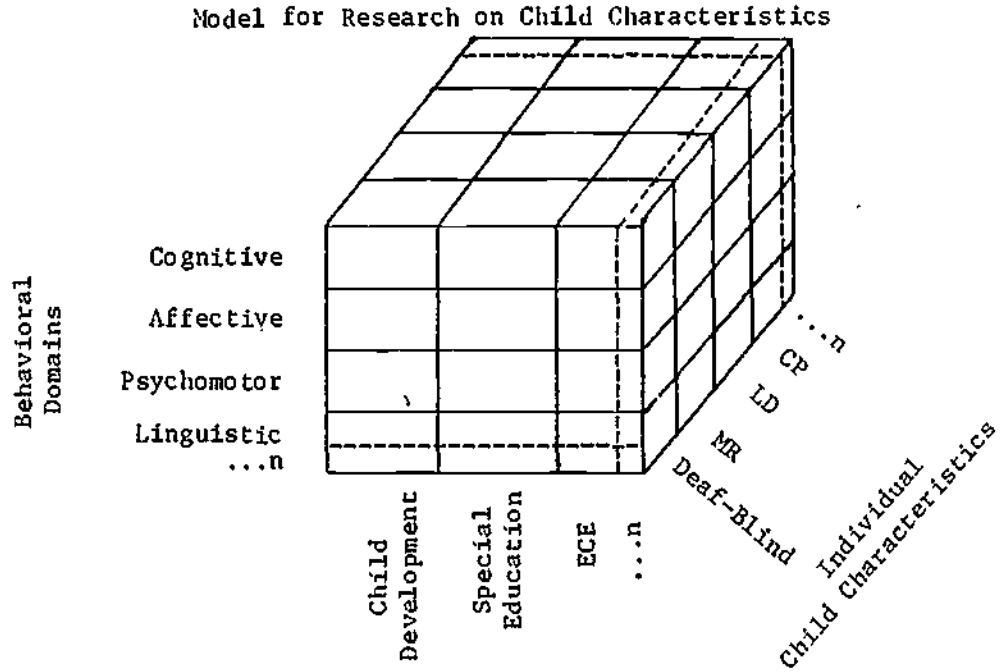
II. Additional Research Needs

During the conference, the participants identified critical needs for research in each of the four topic areas. Some of these needs were incorporated in the recommendations as top-priority and are reported above. (A fuller, more detailed description of these needs and the identification of additional ones can be found in the reports of working sessions of the conference.) The additional research needs are reported below along with researchable questions and suggested research strategies. The recommendations are presented by category for convenience. However, in many instances, the issues within each category are concerned with more than one focus area.

CHILD CHARACTERISTICS

One group presented a model that may be used to identify what is already known and those areas that need further investigation.

Figure 2
Model for Research on Child Characteristics



The Child and His Environment

One group pointed out that exceptionality may be seen as a lack of fit between child characteristics and environmental demands. They recommended, therefore, the development of an ecological model as the frame of reference for research related to child behaviors. The model should address such variables as:

- Socialization
- Development within diverse cultures
- Interaction of child traits and demands of the environment
- Development of self concept and the effect of stigmatization
- Family characteristics as they relate to the child's developmental progress
- Nutritional and genetic influences on the child's development
- Attitudes of parents and parent substitutes as related to emotional development of the child

Definition and Effects of Handicapping Conditions

Determine the characteristics of infants which are indicative of or predictive of handicapping conditions.

> How can early identification be used to indicate the need for programs of early intervention?
>
> Can methods be devised that detect potential mild educational handicaps in preschool children? In school-age children?

Determine the characteristics of parents that are predictors of handicapping conditions in their children.

> Can the identification of genetic and emotional problems in parents help in preventing handicaps?

Study the effects of various disabilities on the development of the child, on the family unit, and on teachers.

Define handicapping conditions and identify the characteristics associated with each.

> Establish a multidisciplinary panel to arrive at professional agreement on definitions.

Assess the processes by which handicaps are identified and diagnosed and handicapped children are referred to treatment agencies with a view toward:

- Making diagnoses more accurate
- Identifying handicaps at an age when effective treatments may be prescribed
- Avoiding categorizing or labeling
- Advising parents on deciding what kinds of behaviors for which to seek help

Determine the least restrictive and most appropriate environment for individual handicapped children.

> What characteristics predict how well a handicapped child will be assimilated into regular programs with nonhandicapped children?

Provide a means for disseminating basic research on the characteristics of handicapped children to educational personnel.

> Translate highly technical material so that it can be understood by those who are directly concerned with education of young handicapped children.

The Development of Critical Skills and Behaviors in Handicapped Children

The participants felt that a basic need is to delineate specific competencies that children need in order to achieve a more complete life. The global approach does not lead to understanding development sequences or desired behaviors nor does it indicate appropriate programs of education. In discussing research needs related to this issue, the participants pointed to the need to consider four major factors:

- Analysis of the behavioral domains including cognitive, affective, psychomotor, socio-personal, and language
- Determination of which skills and behaviors are needed in the various domains
- Definition of the processes by which they are developed
- Comparison of handicapped and nonhandicapped children

What effects do specific handicapping conditions have on the sequence of development in all areas? How does development differ from that expected of nonhandicapped children?

Conduct longitudinal studies on groups of children with various handicaps.

What critical skills are needed in the various areas of development (e.g., motor/sensory, cognitive, social and linguistic)? How do interactions among the domains contribute to the overall development of the child?

Document what the child needs in order to progress successfully through the early stages of development.

Determine how integration of the domains affects the child's adaptive behavior.

Develop a scale of normative characteristics in the emotional-social domain that will permit comparisons between handicapped and nonhandicapped children.

Develop schemes for observation that focus on micro-behaviors.

How do family attitudes and patterns of parent-child interactions affect the development of affective characteristics in handicapped children?

Measurement of Child Characteristics

In order to undertake the kinds of research cited above, it will be necessary to develop additional measurement tools. These should make it possible to assess more effectively the child's development and the impact of educational programs.

Develop ways of measuring overall and specific development in the various domains (e.g., cognitive, adaptive, and motor) for normal, handicapped, and at-risk children with special attention given to consideration of the need to adapt these measures for use with children with different types of handicaps.

Design systematic research studies including those that are longitudinal, both descriptive and comparative, short-term and sharply focused on crucial problems, and related to the origins of learning patterns.

Develop culture-appropriate tests to determine factors that are indicative of success.

Identify measurement strategies and techniques for the assessment of interactions among child and environment characteristics.

Do the setting and type of techniques used affect the measurement results?

- Delineate the nature of information provided by each measurement device.
- Design and validate strategies for multimethod, multi-trait assessment.

SERVICE DELIVERY SYSTEMS AND INSTITUTIONAL MODELS

The distinction between delivery systems and institutions was useful in focusing attention on both aspects of early childhood education. However, in discussing problem areas and needs for research, the participants invariably considered these as two interrelated aspects of the same issue. Recommendations for research that emerged from these discussions are, therefore, presented here together.

In discussing models for the effective coordination of services for handicapped children, one group identified variables that must be included in the model. These are presented in Table 1 on page 87. Some of the variables were considered in detail and for these, specific needs for research were identified and researchable questions were posed.

Needs of Consumers

Determine the degree to which communities (and particular subgroups within the communities) want proposed services and will utilize them.

Are consumer groups interested in proposed services? Do their attitudes and needs justify the implementation of these services?

Are parents more motivated to accept and support programs that take into account their own attitudes and customs?

Table 1

Variables to be Included in Models for
Effective Coordination of Services to Handicapped Children

Educational delivery systems variables

- self-contained classrooms
- resource rooms
- itinerant services
- clinical settings
- center-based settings
- home-based settings
- hospital-institution settings

Student variables

- type of handicap
- age
- interaction among the exceptional children
- interaction of handicapped children with non-handicapped

Parent variables

- those working in the educational setting
- those trained or working through a home-based program in conjunction with the professional staff
- parents receiving group therapy with other parents of the handicapped
- parents interacting with parents of non-handicapped
- parent roles in policy making and other roles
- parent education
- training teachers to work with parents
- training parents to work with staff

Staff variables

- ratios of staff to students
- characteristics of staff members
- training
- interaction among staff members
- paraprofessionals and volunteers - their training and utilization

Administrative organization and coordination

- public schools--single or consortiums
- private agencies
- state and community agencies
- single or multi-state (regional) agencies
- interaction and communication network between the agencies
- sources of revenues
- funding patterns which are most effective
- effective record keeping and information systems

Evaluation

- child outcomes
- cost effectiveness procedures
- coordinated data collection systems between all levels of the network
- implementation of services and programs
- cost-benefit procedures (follow-up)
- other client outcomes--parents, etc.
- societal and community impact studies--changes, etc.

Educational and therapeutic learning theories, systems, and philosophies

Determine modes of delivery that are appropriate for different communities.

> How does the delivery mode (e.g., center-based or home-based) interact with geographic characteristics (urban, rural) and with community characteristics (ethnic, socioeconomic status)?

Conduct retrospective studies, sampling over different combinations of characteristics.

Evaluation of Services

Develop models for evaluating service programs of education for young handicapped children that will help to establish accountability standards, indicate cost-effective strategies, and effect change in institutions and programs. Take into account basic, critical aspects such as:

- Cost effectiveness, including time required for different types of service to maintain the child's functioning at or close to his potential
- Long-range impact, as measured by needs and characteristics of children and types of educational programs
- Amelioration of specific handicapping conditions
- Satisfaction of target populations with services and outcomes
- Differences between programs for nonhandicapped children in terms of services required and realistic expectations
- Funding sources and type of agency sponsorship
- Specific intervention procedures and availability of supportive services, program characteristics, and curriculum models
- Continuity of service through coordination with community resources
- Institutional settings
- Progress of children as a function of the interaction of the delivery model with child and family characteristics
- Parental involvement in the child's education

Make comparative studies of different systems for service delivery.

Which systems are effective for particular kinds of children in particular institutional settings?

Compare across conceptual models.

Sponsor clusters of demonstration projects (perhaps through consortia) to coordinate development of models and materials, data collection, evaluation, and dissemination of results.

Develop criteria for long-range evaluation of child outcome; conduct longitudinal and cross-sectional studies.

Provide for recycling of evaluation data as input for improving the delivery of services.

What are the effects of integration (or assimilation) on both the handicapped and the nonhandicapped children involved and on their families?

Study the effects on educational and personal development of the nonhandicapped and of children with different handicaps.

Determine family attitudes as evidenced by support of the program.

Relate integration approaches to different needs of individual communities.

Are home or school/home training programs effective?

Identify criteria useful in determining which people function effectively as caretakers.

What devices and aids are most appropriate and useful?

Relate devices to needs, characteristics, and problems of handicapped children.

Develop a manual of devices and aids with information on:

- Purpose served
- Efficiency
- Performance characteristics
- Benefits provided

Supportive Services

Identify and/or develop models for the effective coordination of services to handicapped children.

What support needs to be provided by teachers, other personnel, and nonhandicapped cohorts after the initial intervention and integration of the handicapped child?

- Determine what supports are available and which are best suited to maintaining the child's optimal progress.

Develop exemplary strategies for the involvement of parents in early childhood intervention programs.

What are the best ways to involve parents?

What types and degrees of involvement are related to desired outcomes?

Do different categories of children require different types and degrees of parental involvement?

What characteristics of parents are related to effectiveness in working with the handicapped child?

Does the parent derive benefits from the involvement?

How can parents be helped in making critical decisions through information and guidance?

Develop alternative approaches to comply with legal requirements for services in situations where parents do not--or cannot--cooperate.

What services can be provided to the preschool child in the absence of operative programs?

- Explore the use of media and other training mechanisms to stimulate parental interest and participation.

- Identify the roles of professionals and institutions in accepting legal responsibility for protecting the child's rights.

Assess the effectiveness of supplements or substitutes for parents as primary caretakers.

What is the most appropriate type and extent of intervention?

- Consider type of handicap, stage of the child's development, and alternative models such as neighborhood out-patient services, halfway houses, development homes, and foster homes.

Determine the appropriate role of the oonsumer in program implementation and development.

Educational Programs for the Handicapped Child

Provide long-term support for systematic curriculum and instrument development that permits the study of curriculum components, how they are operationalized, and their effects on children and parents.

Develop instructional technology for use by teachers and parents.

> How do child characteristics determine what type of instruction is needed?
>
> How should handicapped children be taught critical skills?
>
> Which techniques succeed and which fail in given skill areas, in given settings, with given kinds of children?

Determine at the national level the kinds of information that are needed in order to make efficient and effective decisions.

> What information is needed in order to make appropriate decisions in regard to placement, educational programming, administrative setting, and medical treatment?

Make provision for a research component in planning and funding model demonstration programs.

Institutional Settings

As deinstitutionalization and alternative living environments become more prevalent in our culture, it is imperative to examine the effects on children and cost-benefit effects of these various service delivery elements either singly or in combination. In addition, it is necessary to determine the main strengths of various institutional models in order to maximize service to handicapped children.

Compare the effectiveness of differing types of institutional settings: home, residential school, foster homes, or group homes.

Is the care provided in a family setting (natural or other home) more effective than that provided in an institution?

Are alternatives to institutionalization functional for severely and profoundly handicapped young children?

What alternatives are appropriate for which kind of child and family?

- Consider social and educational risk factors.

- Determine the most effective use of fiscal resources.

Develop model community agency programs for providing young handicapped children and their families with education-related support such as diagnosis, devices, and financial aid.

How can agencies be made aware of each others' philosophies and objectives?

Is there a need for a referral agency to evaluate available services and educate parents about available alternatives?

How can cooperation among agencies be facilitated to provide coordinated services?

Conduct a functional analysis of institutions that are providing services for the handicapped in a given region.

What factors interact to facilitate or prevent the total delivery of services?

- Determine perceptions and attitudes within institutions and toward other institutions and perceptions and attitudes of parents toward services provided and needs of their children.

Develop a model plan among institutions for totally coordinated delivery of services. Have the plan evaluated by someone other than the funding source. Pilot-test components of the plan. Implement the plan.

Is the plan successful in terms of children served, staff turnover, and institutional change to better meet the needs of handicapped children?

Is there an improvement in attitudes of institutional personnel and parents?

Is there increased communication among institutions and an increased rate of delivery of services?

Administration

Conduct comparative studies of types of institutions that deliver services to preschool handicapped children and their families.

What organizational parameters influence the institution's ability, or failure, to achieve goals and objectives?

- Carry out sociological/anthropological systems analysis.
- Determine the relationship of political, economic, and social factors to the development of institutional structures and their effects.
- Study successful institutions longitudinally to determine useful strategies for coping with challenge and implementing change.

Does the organizational climate affect personnel performance?

- Study the effects of leadership styles, reward systems, attitudes toward work, and opportunities for staff interaction.
- Study the impact of tenure on teacher performance.

Develop techniques to assist individuals to determine their own perception of their role and their expectations of others.

Is communication improved when individuals understand and appreciate their own and others' needs, expectations, desires, and priorities?

Develop and evaluate effective change models.

How can institutions be structured so that they can benefit quickly from new information and new procedures?

- Use methodologies like those used in systems engineering, learning theory, and community psychology.

What factors maximize the adoption of new programs by institutions?

- Determine strategies for initiating interest in adopting the program.
- Develop strategies for implementing the program in given institutional settings.
- Identify program characteristics which are most effective in continuation of the program.
- Determine whether adoption of program causes or requires institutional changes.

Analyze the processes by which decisions are made relative to early childhood education for the handicapped in various institutions.

What factors enter into the decision-making process? What negative factors subvert effective implementation of programs?

What is the role of research and service institutions in influencing legal decisions and legislation?

What responsibilities do government agencies have to provide for continuous program needs of children?

How can continuity and integrity of programs be maintained after the program's originator is no longer in charge?

Identify in existing model programs for handicapped children those personal interactions that either facilitate or inhibit utilization of the models.

What variables have critical effects on:

- Program developer and/or staff?
- Program users?
- Institutions?

Attitudes

Identify strategies to develop positive attitudes toward children with different handicaps and in different educational settings.

How do teachers, peers, and administrators respond to handicapped children?

- Study expectations of inner city teachers for exceptional children.

How can positive self-image be fostered in the handicapped?

Information Systems

Develop a universal data system to provide developmental information to agencies working with handicapped children and their families.

Provide a system to integrate, translate, and disseminate information.

Establish criteria for evaluating the adequacy and effectiveness of materials.

Provide consumer information on products and materials for special education programs.

PERSONNEL PREPARATION

Personnel in the context of this conference was used primarily to mean those who have had professional training as educators. In many cases, however, the participants used the word to mean all who play a part in educating the handicapped child, such as parents, paraprofessionals, medical staff, and so on. They also used the term for those who train teachers.

Entry into Training in Special Education

Develop a competency-based evaluation scale for the guidance of student applicants.

Develop selection criteria and procedures.

Competencies Needed by Personnel

Identify the competencies and attitudes needed to work effectively with various kinds of handicapped children and their families.

Are different competencies needed to work with children of different ages and degrees of handicap in different settings?

What competencies are needed by teachers, administrators, and teacher trainers?

- Identify criteria for basic competencies by studying teachers judged successful in producing desired pupil outcomes, by expert consensus, and by feedback from trainees and practicing teachers.

Analyze the functions that need to be done in a comprehensive service delivery system?

What roles are derived from this analysis?

What competencies and interdisciplinary training are needed to prepare personnel for those roles?

Training Models

Define the role of service institutions in maintaining and improving the skills of staff.

Identify different community agencies that are equipped to provide training to personnel.

What agencies have a capability to train specific kinds of people who work with the staff?

Can consumers train their own personnel?

Is it efficient to contract with private concerns for personnel training?

Assess the ability of training institutions to produce teachers who are able to work effectively with handicapped children.

What are the optimal training procedures for academic and practicum experience?

What is the optimal internship experience?

Develop, implement, and evaluate techniques for delivery of inservice training.

Are there effective approaches to providing inservice training for medical personnel involved in the identification and treatment of handicaps and family counseling?

- Include identification of education-related problems in such areas as oral language, problem solving, and social and motor development.

What type of training do regular teachers need to change attitudes and behaviors toward the handicapped children who are assimilated into their classrooms? Which are most effective in preparing the teacher to deal with various handicaps and with families?

What variables are central to retraining personnel to work with the handicapped? Do they include:

- Previous experience?
- Personal characteristics?
- Experience and role with nonhandicapped preschool children?
- Age?

Determine the training required to prepare early childhood personnel to interact effectively with the parents of handicapped children.

How should these personnel be trained?

What is the effect of intensive contact between teacher and family, and does this effect vary across cultural groups?

Who should provide the liaison with parents?

Manpower Needs

With the decrease in total school populations and the increase in the handicapped population in the schools, needs for trained personnel are changing. Teachers may be retrained to work with young handicapped children. (Research needed on inservice and retraining is discussed elsewhere in this section. Additional needs are given here.)

Identify teacher-certification reciprocity between states and licensing agencies.

What are the requirements for certification?

What are the constraints on reciprocal agreements?

Identify the needs for manpower at the child-service level and develop a system for providing information to the trainers of personnel. Base the assessment of needs on judgments of optimal service delivery systems and institutional settings.

Determine realistic estimates of teacher/child ratios needed for optimal effectiveness of different kinds of programs.

Summary

The major themes that emerged from the conference were:

- Great concern for improved early diagnosis
- Appropriate intervention that will lead to optimum development
- The need for comprehensive research on programs and agencies (institutions) to develop models for total service to the handicapped and their families
- Improved preparation of all personnel who work with the handicapped child by the identification of competencies that are needed and the design of effective strategies to develop these competencies

It was suggested that research sponsored by BEH should provide the impetus for comprehensive, longitudinal, and interdisciplinary investigations. The participants emphasized that research should be based on sensitivity to different needs for different handicapping conditions and environmental differences, and should include strategies for the collection and dissemination of information.

The participants assumed that the purpose of the conference was to provide an opportunity for them to participate with the Bureau in setting directions for planning research related to early childhood education for the handicapped. As an evaluation of the effectiveness of the conference, the participants recommended that the Steering Committee analyze how the research needs identified by the participants related to future BEH decisions. They recommended, further, that the Steering Committee report the results of this analysis to the conference participants.

Those who attended the conference strongly recommended that BEH report the outcome of the conference to the National Advisory Committee, requesting the Committee's support for research priorities that were developed by participants at this and similar conferences. In addition, one group recommended that the Steering Committee report on the relationship between the recommendations made by the conference participants and subsequent decisions on research made by the Bureau.

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